## Needlework Knitting

## and Cutting Out

for Evening Continuation Schools

* HIZABETH ROSEVEAR

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## A MANUAL OF

NEEDLEWORK, KNITTING, AND CUTTING OUT


## A MANUAL

OF

## NEEDLEWORK, KNITTING

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## CUTTING OUT

FOR EVENING CONTINUATION SCHOOLS

BY

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WITH ORIGINAL ILLUSTRATIONS AND SECTIONAL DIAGRAMS

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AND NEW YORK
1894

## EVENING CONTINUATION SCHOOL CODE

Sewing Course

To cut out garments requiring only straight or slanting lines, i.e. a working woman's apron, a flamel petticoat, an infant's shirt.

To pleat material into bands suitable for use in aprons, woollen petticoats, etc.

To sew on buttons, make buttonholes, and set on tapes.
To make up a complete garment (cut out by the scholar) showing the practical application of the above-named exercises.

To cut out in different sizes garments requiring curved lines, i.e. chemises, drawers, pinafores, boys' shirts (flannel or Oxford shirting).

To gather material and set it into bands, i.e. neck or collar bands, wristbands, etc.

To run and feather-stitch tucks.
To join material on the straight, on the cross, and on the curve by various kinds of seams.

To set in gussets and make false hems.
To make up a garment (cnt out by the scholar) showing the practical application of the above-named exercises.

To cut out in several sizes (from measurements) a plain dress bodice and a nightdress.

To set on hooks and eyes, to case bones, to overcast seams, and to bind skirt edges.

To make up a dress skirt, lined or unlined. To make up a simple dress (skirt and bodice) or a nightdress, cut out by the scholar.

## Kinitting and Mending Course

To knit a man's sock.
To darn thin places on flannel and holes in socks and stockings.
To patch in flannel.
To knit a stocking.
To patch in calico.
To darn and repair house linen, i.e. sheets, tablecloths, etc. To patch and darn dress materials (print and woollen).

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## PREFACE

This Manual of Needlework, Knitting; and Cutting Out is designed to meet the requirements of the Code for Evening Continuation Schools, and is especially intended for the use of the Scholars attending the Needlework Classes in these Schools. The Manual is also suitable for the use of Women and Girls who are desirous of self-improvement in an important branch of Housewifery. Dressmaking is not included, though it is one of the requirements of the Evening Schools' Code, because this art is best learnt from some good and simple scientific system.

Elizabeth Rosevear.

Stockwell Training College, London, S. W., 1894.

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## PART I

## SEIVING COURSE

## CHAPTER I

Cutting out.-Apron, Petticoats, Infant's Shirt

## CUTTING OUT

A Working Woman's Apron (Fig. 1)
Materials needed.- $1 \frac{1}{4}$ yards of apron cloth, or Hessian, or coarse brown holland, scissors, and inch measure ; tape for strings and shoulder-straps.

## The Lesson

Measuring, Folding, and Cutting out.-(a) The Skirt. -Measure down the selvedges 1 yard, and crease the material across its width, and cut it true to a thread. (b) Waistband.-Measure in on one selvedge side of the skirt 3 inches, fold this strip down the length, and cut it off quite even and straight. (c) Bib.-Take the $\frac{1}{4}$ yard of material and measure across its width 24 inches, crease it and cut it off, then fold it in halves and cut it. Each piece will be 9 inches long and 12 inches wide. Take one piece and fold it down its length into halves and quarters, and crease the folds well. Open it so that it is
twofold, and 9 inches long and 6 inches wide, and one crease is visible. Place the folded edge to your left hand and fold from the top and side open edges down to the crease, which is one-fourth of the width of the stuff. Place your hand on this slanting fold and cut along the crease


Fig. 1.
carefully and evenly. The bib must be 12 inches wide at the top and 6 inches at the bottom or waist-line. (d) Pocket.-Take another piece of material that is 9 inches long and 12 inches wide, and fold it into halves, quarters, and eighths down its length. Open it so that it is twofold
and with two creases visible. Fold from the top and side open edges in a slanting line down to the first crease at the bottom. Place your hand on this fold and cut off the material quite straight and even. The pocket must be 12 inches wide at the top and 9 inches at the bottom.

> Notes.-1. If material 1 yard wide will not make the skirt full enough, a breadth and a half must be put into it, and it will be more economical to cut two aprons at the same time. $3 \frac{1}{2}$ yards of material will be needed for two aprons. 2. If the waistband is shaped like Fig. 1, more material will be required. A straight band is.more economical, and easier to cut out and make up. 3. The strip cut off for the waistband is a yard long, so that for a waist of 27 to 30 inches two tape strings $\frac{1}{2}$ yard long must be sewn at the ends of the band, to tie comfortably round the waist.

## A Wonan's Flannel or Serge Petticoat

Materials needed. -From $2 \frac{1}{4}$ to $2 \frac{1}{2}$ or 3 yards of flannel or serge from 24 to 30 inches wide, a strip of calico or drill or Turkish twill for a straight waistband, buttons, scissors, and inch measure.

## The Lesson

1. Measuring, Folding, and Cutting out.-(a) Divide the 3 yards of material into three equal lengths; (b) find the right side of the flannel and let the nap or woolly surface fall downwards, and mark by a pin with its point downwards in each breadth ; (c) set aside two breadths; ( $d$ ) take the other breadth and fold it in halves down its length, being careful to see that the nap is falling downwards, then fold it again into halves and then into quarters ; (e) open the material and place the folded edge to your left hand, and then fold from the bottom left-hand corner $D$ at the open side edges to the first crease at the top E in a slanting line; $(f)$ place your left hand on this folded material, and cut through
the double material quite even and straight (Fig. 2). This is the front breadth, and it must be sloped as shown in the diagram at F to G (Fig. 2), if a circular band is used, but must be kept straight


Fig. 2. if a straight waistband is preferred. The other two breadths are not sloped at all.
2. Waistband. - If the waistband is a straight one, cut a length of material the size of the waist, plus 2 inches for lapping, and from 3 to $4 \frac{1}{2}$ inches wide.
N.B.-The length of the band is the selvedge way of the stuff. A strip of material left off the width of some calico garment previously cut out will be quite suit. able. Circular bands are much more difficult to cut out and make up, and require more material(Fig. 77 ).

Notes. - 1. The right side of flannel has more of the fluffy, downy surface than the wrong side. This fluffy, downy, hairy surface is called nap. The right way of the nap is always downwards, and when it falls in this direction the flannel is flat and smooth to the tonch, and wears and keeps clean longer than when it is placed the wrong way. 2. A woman's fiannel petticoat can be made with straight breadths in the front and the back, and with side gores. The gores are cut from another breadth of the stuff as follows: Fold the breadth into halres down the length, and place the folded edge to your left hand : measure off at the top from the open side edges $\frac{1}{4}$ of the width
of the stuff when it is folded in halves, and then fold this in a slanting line to a point at the left-hand bottom corner, and cut it off ; then cut up the fold at your left hand, and you will have two gores. The garment so cut out is narrower, and is not so suitable for working girls and women, who require full garments to allow of kneeling and active movements. A gored petticoat needs as much material as the one given in the lesson, and diagram (Fig. 2). 3. The placket hole of petticoats is always made in the back breadth, and is usually $\frac{1}{3}$ of the length of the garment. In the petticoat (Fig. 2) the placket is left open at the top and centre of the back seam. In a petticoat with side gores, the placket must be cut in the middle of the back breadth.

Dinensions of a Girl's and a Child's Petticoat
Girl's Petticoat.-Age 14 to 16 years.

1. Three breadths of flannel or serge 27 inches long and from 22 to 27 inches wide.
2. Waistband 26 inches long and 6 inches wide.
3. Placket hole $\frac{1}{3}$ of the length of the garment if the waistband is straight, but less if a circular band or petticoat bodice is used.
4. Slope of front brealth at the sides $\frac{1}{3}$ of the width of the stuff, when it is folded into halves.

Child's Petticoat.Age 5 to 7 years (Fig. 3).

1. Two brealths of flannel or serge 15 inches long and from 22


Fig. 3. to 26 inches wide.
2. Waistband 24 inches long and 5 inches wide before being doubled.
3. Placket hole about half the length of the back breadth,
with a straight waistband, and less if a petticoat bodice is used.

Cutting out an Infant's First Shirt (Figs. 4 and 5)
Materials needed.-Lawn, or cambric, or fine linen, or nainsook muslin, or fine longcloth, 10 inches long and from 22 to 25 inches wide; scissors, inch measure, and narrow tape.

Proportion.-The width of first shirts is twice and a half the length, as a rule.

## The Lesson

1. Measuring, Folding, and Cutting out.-(a) Take a


Fig. 4. piece of material 10 inches long and 22 inches wide (or wider) ; (b) fold the material into halves, then into quarters, and lastly into eighths, and well press the folded edges ; (c) open the material so that it is fourfold and the eighth crease is in the centre, i.e. from E to F in Fig. 4; (d) fold the material into thirds across its width and then fold the top third into thirds; (e) lay the fourfold doubled edges to your left hand with the selvedges going up and down ; ( $f$ ) fold the material in a slanting line from the eighth crease in the centre down to the two-thirds crease, and well press this fold (E to G, Fig. 4): (g) cut from E along
this slanting line to I quite through the fourfold stuff. This slanting line shapes the shoulders and the flaps. ( $h$ ) Cut down from the top at A to J quite through the fourfold material for the armholes.
2. The Gussets.-Take a $2 \frac{1}{2}$-inch square of the material and fold it diagonally from corner to corner, and cut it across the slanting line so as to get two triangular pieces of stuff. These form the sleeves.
3. Strengthening Tapes.-Cut off four pieces of


Fig. 5.
narrow tape, $1 \frac{1}{2}$ inches long, to strengthen the corners of the flaps.

Notes.-1. Fig. 5 is the pattern most commonly used for new-born babies. 2. Infants' shirts are always cut out in sets of three, or six, or twelve. Three shirts the same size as that in Fig. 5 can be cut from 1 yard of lawn or cambric, or soft nainsook, or fine longcloth, with plenty of material left for gussets. 3. Nainsook and longcloth are generally 36 inches wide, so the extra material off the width after the shirts are cut out will be sufficient for babies' closed shirts in small sizes. Lawn and cambric are usually the width required for these shirts.

## CHAPTER II

Construction.-Making up a Woman's Apron and Petticout and an Infant's Shirt

Stirches.-Pleats, Tapes, Buttons, and Buttonholes

Making up a Working Woman's Apron
Materials needed.-The apron, pins, needle, tacking and sewing cotton.

## The Lesson

1. Skirt.-(a) Fix a narrow hem down the raw selvedge, tack it, and then hem it strongly and neatly; (b) fix a broad hem across the width, tack it, and then hem it neatly and securely ; (c) turn down narrow hems on the two selvedges of the pocket, and tack and hem them, then fix hems across the width sides, and tack and hem them, and seam the ends of the width hems ; (d) fix the pocket to the skirt of the apron as follows: Find the centre of the skirt by folding it in halves down the length, then place the wrong side of the pocket to the right side of the apron, a little to the right-hand side of the centre crease, and $\frac{1}{6}$ of the length of the skirt from the top raw edge, with the selvedges going up and down with the selvedges of the garment; fell the pocket neatly and securely to the apron on three sides (Fig. 1).
2. Pleats.-(a) Divide the skirt of the apron into halves and quarters, and mark these divisions by creases, or pins, or a few cross stitches of tacking cotton; (b) measure off at the top of the garment 1 inch to the right and left of the centre crease, marked DE in the diagram (Fig. 6). This part must be kept plain, and may be wider
tham 2 inches if needed. (c) Measure off from E to B 2 inches, and put in a pin ; (d) crease the material between E and the pin into halves, so that the pleat is 1 inch wide on its upper and under sides; (e) turn the wrong side of the garment towards you, and press the folded edge of the


Fig. 6.
under part of the pleat back to the left, so that the upper part of the pleat may fall towards B at the right hand.
N.B.-If you prefer the pleats to fall towards the centre of the apron, you must at first measure off 3 inches to the right and left of C, and press the upper part of the pleat to the left and the under part to the right hand. When pleats fall towards the centre of the garment the fulness is in the front, and when they fall towards the sides of the garment the fulness is greater at the sides and the back.
( $f$ ) Put in pins to keep the pleats in place and quite even; (g) measure 2 inches from the edge of this pleat towards $B$, and put in a pin, then crease these 2 inches into halves on the right side of the garment, and press back the under part so that the pleat may fall to the right hand, and put in pins to keep the top edges quite even as before. Notice that the edge of the pleat ou the wrong side touches the front edge of the first pleat, because no spaces are left between these pleats. If spaces are left between pleats, they should be kept quite regular. As a rule, spaces are left between pleats when the garment is not twice or three
times longer than that part of the band into which it is to be set. When you have narrowed the garment to the right of the centre crease as much as you ought, you must pleat from D towards A in the same way. Tack the pleats firmly and securely about $\frac{1}{4}$ of an inch from the top edge, and take out the pins (Fig. 6).
3. Making the Band.-(a) Take the strip of material that is 1 yard long and 3 inches wide, and turn down a fold on the raw selvedge $\frac{1}{4}$ of an inch deep, and fix folds of the same depth at the ends, then fold the band in halves down the length, and well press the folded edge, and tack the two short sides at the ends, and $\frac{1}{6}$ of the length of the band from either end along the selvedges; (b) seam the edges of the two ends, and $\frac{1}{6}$ of the length of the band at either end; (c) divide the band into halves and quarters between the seamed portions, in order to match the halves and quarters in the apron, and to set the pleats in regularly.
4. Setting in the Pleats.-(a) Place the garment between the edges of the band, with the centre creases matching (Fig. 1), and the band resting on the line of tacking stitches, about $\frac{1}{4}$ of an inch from the top edge; (b) fasten the band to the garment by a pin; (c) place each pleat quite flat and smooth under the band, and fasten each by a pin; (d) tack the band just above its edge firmly and securely, and remove the pins; (e) fell the band to the pleats, and fasten off securely close to the seamed portion of the band; $(f)$ turn the wrong side of the apron towards you, and place the edge of the band over the stitches, and be careful to see that all parts of the pleats are lying flat and smooth, and then fell the band very strongly to the garment; $(g)$ be most careful to avoid puckering the band, or huddling the pleats; together.

Totes.-1. This method of fixing pleats is suitable for aprons, petticoats, chemises, and drawers. These pleats are single ones. 2. Donble or box pleats, which are used at the bottom of front folds of shirts, are made as follows: Measure to the
right hand and to the left the amount of material you wish to put into the pleat, and then crease into halves, and press back to the right and the left, so that the under edges of each pleat touch each other in the centre of the whole pleat above. Box pleats narrow a garment twice as much as single pleats. 3. Pleats are folds used instead of gathers to narrow the full part of a garment, either at the waist, neck, wrist, or leg. Pleats are always made on the right side of a garment, and they differ in size. Small pleats are suitable at the neck, wrist, or leg portion of a garment, while large pleats look better on petticoats. 4. The rule for proportion of garment to band is two or three times the length of that part of the band into which the pleats are to be set.
5. The Bib.-(a) Fix narrow hems on all four sides of the bib, in the same way as the pocket was fixed, and hem, and seam the ends ; (b) fold the bib into halves down the length and well crease it; (c) place the centre crease of the bib to the centre crease of the apron, right side to right side, and seam the edges strongly and securely on the wrong side, taking great care to put extra stitches at the comers; (d) flatten the seams well.
6. Tape Strings.-The apron can be fastened by a button and buttonhole, as in Fig. 1, but tape strings allow of the garment being more tightly and closely fastened round the waist, and are necessary if the band of the same material is not long enough to encircle the waist.


Fig. 7.

Fixing the Tape.-(a) Turn down a fold at one end, as deep as half the width of the tape; (b) hold the wrong side of the tape towards you, and turn corner $d$ down to the side ce to form a triangle, and then press back the tape, and crease it across from $e$ to $f$, then open the triangle, and you will find a square is ellclosed between cl and ef (Fig. 7), and this square must be placed on the band.

Fixing and Sewing Tape to the Band.-- (a) Crease the band along its length, a short distance, exactly in the middle; (b) put the wrong side of the tape to the wrong side of the band, with the folded edge of the tape $c d$ on


Fig. S.
the band, and the creased line across it, ef, at the edge of the band, the crease down the middle of the tape matching the crease on the band; (c) put in a small pin, or a few tacking stitches in the centre of the square of tape, to


Fig. 9.
keep it quite even ; (7) fasten on neatly and securely at $f$ (Fig. 8) and fell three sides of the square to the band, taking the stitches through the wrong side of the band only, because the material is too coarse to allow of the needle going through the double stuff, (in fine materials it is better to take the stitches quite through the double
stuff) ; (e) bring your needle through the edge of the band to its right side at $e$, and fold the tape back to the wrong side, and seam from $e$ to $f$, holding the right side of the band towards you (Fig. 9) ; ( $f$ ) fasten off very neatly and strongly, and flatten the seam; (g) turn the wrong side of the band towards you and fix a narrow hem at the end of the tape, and then fasten on at the corner and seam it and hem, and seam the other corner (Figs. 8 and 9).

Tapes on the Bib.-Fix the tape as described above, and place one end at each corner of the bib either to form a loop to go over the head, and to be buttoned to the band behind, or as two separate pieces to form shoulder-straps, and to cross over at the back, and to tie at the waist in front. In either method the tape must be placed diagonally at the corners, and felled on three sides of the square, and seamed at the edges, or stitched on the right side. If the tapes are cut into separate pieces, the ends must be finished off like those on the band, but if a loop, a buttonhole must be worked on the tape, and a button must be sewn to the band.

Notes.-1. The first fold of moderately wide tape is half its own width, but the whole width is turned down at first on narrow tapes, and less than half the width on wide tapes. 2. The size of the tape sewn to the band is a square, except narrow tapes which have more fixed to the band ; and wide which have less.

## Making up a Woman's Petticoat

Materials needed.-Three breadths of flannel, a band, one or two buttons, pins, needle, tacking and sewing cotton.

## The Lesson

1. The Skirt Seams.-(a) Lay the front breadth on the table, with its right side uppermost, and the nap falling downwards; (l) take the other breadths and lay
them with their right sides to the right side of the front breadth, and the nap falling downwards, and fasten the breadths together by pins; (c) turn the wrong side of the breadths towards you, and fix the slanting sides of the front breadth to the straight sides of the other two breadths as follows: begin at the top of the front breadth and place the slanting edge $\frac{1}{4}$ of an inch or more from the edge of the other breadth, and put in pins another $\frac{1}{4}$ of an inch from the


Fig. 10. slanting edge of the front breadth, and then tack neatly, being careful to begin at the top, and to ease the slanting edge, as it is liable to be stretched in fixing (Fig. 10); (d) run-and-backstitch strongly, taking the stitches quite through the double material ; (e) when the seam is run-and-backstitched, take out tackings, and fold over the straight edge firmly and smoothly, and tack it close to the edge, and herringbone it (Fig. 11) ; (f) fix the other side of the front breadth in exactly the same way, and sew it in the same manner ; (g) place the straight edges of the second and third breadths together in pre-


Fig. 11. cisely the same way, beginning at the top, and keeping the top edges all even, and measure down $\frac{1}{3}$ of the length of the skirt for the placket hole, and put in a pin ; $(h)$ from this pin to the bottom you must make a seam exactly like those described above ; (i) when all the seams are finished fix a broad hem (from 2 to 3 inches deep) at the bottom, being careful to cut away the uneven edges at the bottom, and to see that the
skirt is equal in length on all sides by placing seam to seam. The hem in flannel need not have a first fold, because it makes the hem too thick and clumsy, and because flannel does not ravel out so easily as calico. The herringbone stitch successfully fastens down the raw edge. If the hem is fixed like a hem in calico, it should be stitched on the right side of the garment ; the hem is improved if it is stitched on the right side, a short distance


Fig. 19.
from the folded edge. The hem is made firm and smooth by the stitching. Two $1 \frac{1}{2}$-inch tucks may be fixed, and run or feather-stitched.
2. The Placket Hole.-(a) Place the wrong side of the garment uppermost, and turn down one deep fold on the left-hand side to form a hem (from $1 \frac{1}{2}$ to 2 inches deep), keeping the hem the same width from the top to the end of the opening, and tack neatly and then herringbone. This wide hem will be on the right-hand side of the garment, when the right side of the flannel is uppermost. (b) Turn down a narrower fold on the opposite
side of the placket, bringing this hem off to a point at the end of the slit or opening in the seam, tack it, and then herringbone it; (c) buttonhole the end of the slit on the wrong side to strengthen any raw edges at the point ; (d) turn the garment with the wrong side out, and lap the right-hand side over the left and stitch it across in two straight rows a short distance apart. Fig. 12 shows the fixing of the placket hole on the wrong side, but hemming stitches are used instead of herringbone stitches, as in a calico petticoat.
3. Waistband.-(a) Turn down a fold $\frac{1}{4}$ inch deep on the two selvedges first, and then at the ends of the band; (b) fold the band into halves along the length, so as to hide the folds, and well press the folded edge; (c) tack the two short ends and seam them; (d) divide the band into halves and quarters, and mark by a few cross stitches.
4. Pleats.-Divide the top part of the skirt into halves and quarters, and pleat the fulness as described in the lesson on making up an apron. Pleats in a petticoat should always fall towards the placket hole, and a broad plain piece should be left in the centre of the front breadth. Set in the pleats as described in a previous lesson.
5. Sewing on a Linen Button.-(a) If the band is a narrow straight one, only one button is needed, and this must be placed in the centre of the band, so the first thing to do is to fold the band in half along its length at the left-hand end, and then open it, and fold this end inwards $\frac{1}{4}$, or $\frac{1}{2}$, or $\frac{3}{4}$, or an inch, according to the size of the button. These creases will be guides for placing the button in the middle of the band, and at the right distance from the end of it. Buttons ought not to be placed close to or beyond the edge of bands or hems, because it is better to allow a portion of the material to lie under the buttonholes for neatness and comfort. (b) Find the right or linen side of the button, and hold this side towards you, and then find the centre of the button by drawing the eye
of your needle over its surface vertically and horizontally ; (c) measure with your eye half the distance between the centre and the outer rim of the button, and mark a circle either with the eye of your needle or by pricking holes with the point (Fig. 13). You must never stitch a linen button close to the metal rim, because if you do the buttonhole will have no room to lie under the button. (d) Hold the right side of the left-hand end of the band towards you, and fasten on the cotton by backstitching a small piece of the calico a little


Fig. 13. distance from where the creases cross each other; (e) place the wrong side of the button with its centre on the place where the creases cross each other, and bring your needle from the wrong to the right side of the button through one of the holes on the

circle; $(f)$ put your needle back two or three threads, and push it downwards through the button and the band, and draw it out gently and loosely to the wrong side of the band, then put your needle upwards through the wrong side of the band and the button, and bring it out on the circle two or three threads above the first stitch (Fig. 14);
(g) put your needle back close to the stitch already made, and push it downwards through the button and the band (and either above or below the cotton on the wrong side, as in ordinary stitching), and draw the needle out as before. Go on stitching the button to the band in this way till you are ready to make the last stitch, when, instead of pulling the needle through from the right to the wrong side of the band, you must bring it out between the button and the band. ( $h$ ) Take the cotton only in your hand, and wind it round the button four or more times rather tightly. This is called stemming the button. You should always stem buttons that have no shanks, in order to tighten the loose stitches on the surface of the button, and to protect the cotton lying between the button and the band from the constant friction of the buttonhole, and to raise the button, and thus give the buttonhole plenty of space to rest on underneath it. (i) Fasten off the cotton by backstitching a small piece of the band under the button, and break or cut the cotton rather close to the stitches. If you stitch and stem the button tightly you will make a deep pit on the wrong side, and pucker the band, and if you stem the button too loosely you will make an untidy ring of cotton round it, and will not raise it from the band sufficiently.
6. Sewing on a Pierced Bone Button.-Bone buttons are sometimes preferred to linen buttons for the bands of


Fig. 15. petticoats and skirts. Bone buttons are pierced in the centre, and must be sewn to the band by passing the needle downwards and upwards through the holes, and forming sometimes straight stitches and sometimes crosses or triangles. Bone buttons and all other buttons must be ver'y strongly fastened to the band and stemmed (Fig. 15).
7. Working the Buttonhole Stiteh on the Band.-We will suppose that you learnt how to work a buttonhole on canvas and calico when you were a scholar in a day school, and that now you only need to be told how to cut
and work it on a band. (a) Crease the right-hand end of the band in half across its length, so that the hole may be exactly in the middle and opposite the button ; (b) measure the width of the button, and place this measurement along the middle crease just inside the turnings at the end of the band, and mark with a pencil, or with the point of the scissors or penknife, the exact width of the button, allowing a thread or two on either side for the corners, then cut the hole perfectly straight with a penknife ; or fold in the end of the band, making a crease, and cut in a straight line along the middle of the band with the scissors, quite through the fourfold material, a thread or two beyond the half width of the button; (c) hold the folded edge and right side of the band towards you, so that the round corner may be at the end of the band (Fig. 14), and fasten on at the left-hand end of the slit, by weaving your needle inder and over the threads above the slit, and leave a short end of cotton (Fig. 16) ; (d) put your needle into the hole or slit quite behind the double material of the band, and bring it out between


Fig. 16. two vertical threads, four threads below the raw edge of the slit; (e) put the fastening-on cotton behind the eye of the needle, and place the cotton coming from the eye of the needle round its point from left to right, thus forming a loop (Fig. 16), and then draw the needle out and upwards to the raw edge of the slit rather tightly, making a knot; $(f)$ throw the cotton coming from the first stitch back over your left hand, that it may lie behind the needle, and put your needle into the slit again one (or more) threads to the right of the preceding stitch and under four threads, then wind the cotton coming from the eye of the needle round its point from left to right, and draw the needle out and upwards rather tightly, thus making another stitch with a knot (Fig. 16).

The knots of the stitches protect the raw edges of the slit, and prevent them from ravelling out. Go on like this till you reach the end of the slit, where you must turn the corner.

## 8. The Round Corner of Seven Knotted Stitches.-

 The round corner of a buttonhole may be made of seven knotted stitches, or of nine without knots. The knotted corner is the stronger of the two. The round corner, whether knotted or unknotted, is used at the end of a band, because it lies flatter under the button than the braced corner. (a) Place your needle under four threads and one thread to the right of the last stitch, being careful

Fig. 17.
to keep the cotton coming from the knot behind the needle, and then wind the cotton round the point of the needle from left to right, and draw the needle out and upwards, thus forming a knotted stitch called No. 1 in Fig. 17 ; (b) put your needle back into the slit close to No. 1 stitch of the corner, and bring it out two threads to the right of No. 1 and one thread higher up, so that your needle now lies under three threads, and finish this stitch with a knot; this stitch is called No. 2 in Fig. 17 ; (c) put your needle back into the slit close to No. 2 stitch, and bring it out two threads to the right of No. 2 and one thread higher up, and finish with a knot ; this stitch is No. 3; (d) put your needle in the slit close to No. 3 and bring it out two threads to the right of No. 3 and under four threads in
a straight line with the hole, and finish with a knot; No. 4 stitch is in the centre ; (e) No. 5 is worked like No. 3; No. 6 like No. 2 ; and No. 7 like No. 1 (Fig. 17). When you have finished the seven knotted stitches put your needle into the slit one thread to the right of No. 7 and under four threads, and make a knot as before. Go on till this side of the hole is finished, and then work the other corner in the same way, if you prefer both corners round, or brace it as described below.
N.B.-You must leave two threads between each stitch in the knotted corner if the material is fine, and if one thread has been left between all the other stitches of the hole. You must draw the knots of the stitches in the corner rather tightly, or the edges will be raised too much, and the shape will be spoilt.
9. The Braced Corner.-(a) When you have buttonholed the second side of the slit, quite close to the corner, you must turn your work, with the corner in front of you, and make two or three long straight stitches from one side of the slit to the other, quite through the double material, in order to draw the sides of the hole closer together without puckering; (b) tuck the fastening-on end of cotton under these stitches to hide it ; (c) your needle and cotton must be coming out at the left-hand side of the slit; ( $d$ ) put your needle into a space above the long straight stitches, and close to the bottom edge of the left-hand side stitches, quite through the double material, and bring it out four threads deep, proceeding in the usual way to make a knotted stitch, and pulling the cotton upwards rather tightly; (e) put your needle into a space one thread to the right of the first stitch and under four threads, and make a knotted stitch as before. Go on like this, being careful that the fifth stitch is in a straight line with the slit, and that the ninth stitch is worked on the bottom edge of the first or fastening-on side (Fig. 17).

Votes.-1. All the stitches must be seen as distinctly on the wrong side as on the right, and must all be four threads deep. 2. Bracing the corner of a buttonhole strengthens it, and keeps it a good shape.
10. Fastening off.-Put your needle through to the wrong side, quite close to the knot of the ninth stitch, and weave it under and over the stitches of the braced corner, and fasten off by two or three backstitches, one over the other, and then break the cotton.
11. Fastening on a new Needleful of Cotton.-(a) If the cotton should break, or should not be long enough to finish the hole, you must put your needle through the slit to the wrong side, and weave your needle under and over the stitches, and fasten off by a backstitch; (b) thread your needle with a new needleful of cotton and weave it under and over the threads of the calico on the wrong side, then turn the right side of the work towards you, and put your needle through the knot of the last stitch, and go on with the buttonhole stitch as before. Always try to make a buttonhole with one needleful of cotton.
12. Unshaped Strengthening Tape.-A straight piece of rather wide tape is often placed at the bottom of the placket hole, on the wrong side of the garment. Method. -(a) Turn down a narrow fold at each end of the tape on its wrong side; $(b)$ crease the tape in half across its width; (c) place the selvedges of the tape on the wrong side of the garment, over the end of the slit, the crease matching the middle of the wide hem, and then tack it in position; (d) hem the tape neatly and firmly to the garment, being careful with the corners. This tape strengthens the end of the slit more effectually than the buttonhole stitches.

## Making up an Infant's First Shirt

Materials needed.-Shirt and two triangular gussets, needle, and fine sewing cotton, trimming of lace or everlasting edging, two pieces of narrow tape from 1 to $1 \frac{1}{2}$ inches long, and small pins and tacking cotton.

## The Lesson

1. Body of Shirt.-(a) Hems. - The first hems must be
made on the wrong side, the selvedge way of the material, as far as 2 or $2 \frac{1}{2}$ inches from the top, that is the depth of the flaps. The hems must be very narrow. The hems of the flaps and shoulder-points must be fixed on the right side of the shirt, because all the flaps are turned down on to the right side of the garment, and the hemming stitches must all match. The hem at the bottom must be fixed on the wrong side. All the hems must be very narrow, without being rolled or clumsy.
(b) Shoulder Seams.-The shoulders are fixed for counterfell, and felled on both sides, or stitched on one edge on the right side from the armhole half-way towards the shoulder-point, and felled on the wrong side for the same distance; then turn to the wrong side and stitch one edge to match the stitching on the right side, and fell the other edge to match the felling on the right side. This is called reversing the stitches. The shoulder-point is turned back towards the armhole, and so the stitches must match. Both edges may be stitched.
(c) The Armholes.-Fix very narrow hems on the wrong side all round, and bring them off to a point at the bottom -that is at I and J (Fig. 5).
2. Gussets.-Fix narrow hems on all sides of the triangular gussets, beginning with the short sides first; neatly hem if material like lawn. Fix the points of the gussets to the bottom of the armholes, and place the wrong sides of the gussets to the wrong sides of the armholes, and seam them in on the right side of the shirt. Be very careful at all the corners to seam closely and securely.
3. Trimming.-Lace edging must be drawn up by the cotton at its edge to the required fulness, which may be $\frac{1}{2}$, or $\frac{1}{4}$, or $\frac{1}{3}$, or $\frac{2}{3}$ of the length of the part to be trimmed. It is usual to trim the armholes, shoulders, and flaps of this garment. (a) Place the right side of the lace to the right side of the garment, and seam the edge of the lace between the folds neatly and regularly ; (b) put extra fulness at all corners and points, and seam the folds as closely together as possible; (c) the joins in the trimming for
the sleeves must be placed at the shoulder seams, and the joins in the trimming for the flaps must be placed at the corners between the shoulders and the flaps. Extra material must be allowed for all joins, in addition to the fulness. (d) Everlasting edging must be hemmed to the garment by its webbing, the right side of the trimming being placed to the wrong side of the garment (Fig. 18).


Fig. 18.
4. Strengthening Tapes.-Strengthening tapes are placed at the corners between the shoulders and the flaps to strengthen these parts. (These corners can be strengthened by buttonhole stitches instead of tapes.) Strengthening tapes are also used instead of gussets at the end of slits and seams, and may be used at the armholes of this garment as substitutes for the triangular gussets.
5. Fixing and Shaping the Tape.-(u) Crease the tape exactly in half ; (b) then turn the tape so that it crosses
somewhere about half its length and forms the base of an angle C (Fig. 19) ; (c) now turn a narrow fold once at each end of the tape, both folds being turned in the same direction, so as to make a right and wrong side to the tape, being careful to measure the long sides of the tape to see if they are equal in length (Fig. 19, A and B) ; (l) put a few tacking stitches where the tape is crossed to keep it in shape.
6. Fixing the Shaped Tape to the Garment.-(a) Turn the wrong side of the garment towards you, and place the wrong side of the tape at C (Fig. 19) at the corner, and put in a pin; (b) measure the sides of the tape once more to see if the tape is placed in equal length on both sides of the opening; (c) tack the


Fig. 19. tape in this position and take out the pins.
7. Sewing the Tape to the Garment.-(a) Hold the right side of the garment towards you, and seam from B to C and from C to A neatly and regularly ; (b) slip your needle at A between the garment and the tape, and bring it out on the tape close to the seamed edge ; (c) fell the tape to the garment as far as the base of the angle, then fell the crossing piece of tape to that which lies under it, and not through the material ; ( $d$ ) slip the needle back again, and fell on till B is reached, where the cotton must be fastened off neatly and strongly ; (e) flatten the tape by pressing it well between the palms of your hands. The felling stitches must show through quite distinctly on the right side.

## CHAPTER III

CUTTLA\% OUT CHEMISES, DRAWERS, PINAFORES, OVERALLS, AND SHIRTS

Cutting out a Gored Chemise by folding it PillowCase Fashion

Method.-l. (a) Cut the requisite length and breadth of the material, and fold it across the width in half, firmly creasing the folded edge ; (b) open the material again, and fold the two raw edges in towards the crease, thus dividing the length into three parts: the underlying portion being half the length, and each of the two upper portions being one fourth the length; (c) tack the selvedges together and neatly seam, without puckering, and flatten the seams when finished.
N.B.-In small-size chemises one selvedge side may have raw edges, which must be joined by sew-and-fell seam, or counterhem.
2. (a) Turn the garment with the raw edges to the desk or table, and with the crease across its width going from right to left, and with the selvedges up and down; (b) measure from the selvedge edges inwards, as many inches as you would like the gore in width, usually from 3 to 4 inches for a chemise, and more for a nightgown; mark the measurement by pins, and crease upwards from them in a slanting direction to the selvedges, and to a point, thus forming four creased lines, two on each quarter of the garment; (c) cut along the four creases to the selvedges, being most careful to cut only the upper portion of the material; $(d)$ the creased line across the centre of the material forms the top edge of the garment, which is narrowed on either side by the width of the gore ;
(e) the four short gores fall to the bottom of the garment, and widen it there ; $(f)$ the sides of the garment must be fixed for sew-and-fell seam from the bottom upwards to within 9 or 10 inches of the top, if a woman's chemise ; or 6,7 , or 8 inches if a girl's (Fig. 20).
3. The Sleeves.-(a) These may be variously shaped,


Fig. 20.-Pillow-case chemise.
and may be cut out with or without gussets. The following is a good and economical method: (l) cut a piece of the material the length and depth of the sleeve required, with an addition to the length of the depth; for instance, if the depth is 5 inches, and the armhole of the sleeve is 14 inches round, the whole width of the stuff must be 19 inches, selvedge way.
N.B.--The depth of a sleere is usually about a quarter of its length.
(c) Fold the material for the necessary size of the armhole, and then cut down $\frac{3}{4}$ or 1 inch, according to the depth of the hem needed, on the square that extends beyond the double material ; $(d)$ cut off this inch from the square at the top, and fold the woof edge over to the selvedge to form a diagonal gusset.
N.B.-Another inch of material must be cut off, at the bottom of the square.
(e) Fix for sew-and-fell seam or counter-hem: if a sew-


Fig. 21. and-fell seam, the double fold must be fixed on the straight woof side, and the single on the side that has 1 inch of woof added to the selvedge of the square gusset (Fig. 21).
X.B.-1. There is a saring of labour in this sleeve, because it dispenses with one seam.
2. If a gusset is added to the sleeve, it must be a square, 1 inch less than the depth of the sleeve.

## 4. Cutting out the Neck

 Curves.-(a) Measure off the shoulders, which in a pillow-case shape chemise must be $\frac{1}{6}$ or $\frac{1}{7}$ of the breadth of the stuff; ( $b$ ) then fold the chemise in halves down the length, and measure down from the top folded edge $\frac{1}{8}$ of the length of the garment for the depth of the curve in the front of the chemise ; then put the point of your scissors in the stuff at this depth (in awoman's chemise about 5 inches), and cut round to the shoulder, being careful to raise the curve as you near the shoulder. When you have cut one side of the curve turn the chemise over, and cut the opposite side of the curve to the shoulder-point. (c) The back of the chemise is always kept higher than the front (about $\frac{1}{10}$ of the length of the garment in the middle), turn the back part of the garment towards you, and slope it by the curve in the front, only keeping it higher till you near the shoulders, where the edges of the curves must meet.
5. Front Slit. - If you put on a front fold to the rightarm side of the chemise, and take a hem from the garment on the left-arm side, you must not cut down the centre crease in the front of the garment, but $\frac{1}{4}$ of an inch or more to the right of the centre crease, so as to increase the width of the left-arm side of the garment before the hem is fixed. Tear down the front, or cut, as long as will be comfortable and necessary. In a woman's chemise from 5 to 6 inches will be enough for the slit.
6. Neckband.-The whole length of the neckband selvedge way of the stuff generally equals the width of the material. Suppose the width of the calico is from 34 to 36 inches for a woman's size chemise, the band must be from 34 to 36 inches long. The depth of the band when folded should be $\frac{3}{4}$ inch, so that it must be 2 inches wide when first cut out. Bands of children's chemises are narrower.
> N.B. -The length of the band varies with a high or low neck curve, as well as with the size of the garment.

Cutting out Another Gored Chemise with Yoke Neckband

1. Folding and Cutting out the Body of the Chemise.
-(a) Take the right length of material, and fold it in half, and well crease the folded edge ; (b) fold the garment into halves again across the width, and then open it out: (c) measure inwards from the selvedges at the top folded
edge 4 inches for the width of the gores; ( $l$ ) fold from the 4 inches down to a point at the centre crease, on both sides of the garment; (e) cut off these gores, and place the points at the centre crease and the wide part of the gores to the bottom edge ; $(f)$ cut the folded part of the gores. Two gores are thus added to the garment, which is widened at the bottom, and narrowed at the top.
2. The Sleeves.-(a) Take a piece of material from 18 to 20 inches long and from 5 to 6 inches deep, and fold it


Fig. 22. in halves, so that it is 9 or 10 inches long; (b) divide this into thirds, and crease from $\frac{1}{3}$ at F to A , and cut off in a true slanting line ; $(c)$ fold the depth of the sleeve into halves and quarters, then crease a slanting line from the first quarter at E to F , and cut a curve inside the slanting line (Fig. 22). The sleeve is now cut out. Lay this sleeve on the second piece of material, and cut it out exactly the same. The gusset sleeve can be used, if liked.
3. The Yoke Neckband.-(a) Take a piece of material from 16 to 18 inches long, selvedgewise, and from 8 to 10 inches deep; (b) fold this into halves down the length, so that the double material is 4 or 5 inches wide ; (c) fold the

Folded


Fig. 23. length into halves, so that the material is fourfold; $(d)$ then fold the length into halves again, and then into quarters ; (e) open the material, so that it is still fourfold, and three creases are visible; $(f)$ fold the depth into thirds; (g) cut from the $\frac{1}{4}$ crease at G to the $\frac{2}{3}$ crease at E in a curve (Fig. 23); (h) fold a slanting line from E to F , which is $\frac{1}{3}$ of depth to $\frac{1}{4}$ of
length, and cut this off quite straight; (i) fold a slanting line from F to H , which is $\frac{1}{3}$ of the depth from the bottom edge, and cut in a straight line from $H$ to the $\frac{1}{2}$ crease,

and then curve round to F , and the half yoke and its lining are cut out (Fig. 23).
N.B.-It is better to cut out the pattern in paper first, and lay it on the calico. The yoke is made in two halres, and must have linings to make it double material, like all other bands. A chemise with a yoke neckband is more durable than any
other pattern, and more suitable for women and girls occupied in active labour than chemises with sleeves and shoulders all in one piece.
4. The Binders.-Binders are false hems, and are sometimes cut quite straight, and sometimes are cut on the cross and on the curve. The binders for this chemise are best cut on the straight. Four straight pieces not less than 6 inches long and 2 inches wide are required.

Scale for Womi n's and Girls' Chemises
(a) Length $=\frac{5}{8}$ or $\frac{2}{3}$ of the height of the wearer. If the wearer is 4 feet high, the


Fig. 25.
N.B.-Children's chemises are usually as wide as they are long. Figs. 24 and 25 are diagrams of a girl's and a child's chemise.

Cutting out a Pair of Child's First-Size Drawers

1. Method of Cutting out in Paper by Folding.-(a) Take a 24 -inch square of paper, and fold the left-hand
bottom corner to the right-hand top corner, half handkerchiefwise ; (b) lay the diagonal crease to your left hand, and the selvedge BC to your right hand, as in Fig. 26 ; (c) fold the length into thirds across the woof, so that each division will be 8 inches; open the paper and you will find two creases across it from BC to the diagonal fold;


Fig. 26.
(d) fold BC in on the half square to $\mathrm{H} 4 \frac{1}{2}$ inches, that is, nearly $\frac{1}{6}$ of the width of the square; (e) cut from E, which is a little below the first third, and curve inwards to the vertical crease, which goes down from H to the diagonal fold, and then outwards a little below the second third, i.e. to $\mathrm{F} ;(f)$ fold the top third into halves across the woof, and slope off 1 inch from $F$ to $G$, i.e. as far as half of the
top third ; $(g)$ cut in a slanting direction from $G$ to $H$, which is as far as the vertical crease from H downwards; $(h)$ fold the garment in a slanting direction from H to D , and cut the piece of material represented by dotted lines from $A H$ to $D$ off, and the paper pattern of a pair of drawers is cut out.
2. Method of Cutting out in Material.-(a) Take a piece of calico or flannel, or soft swansdown calico, 24 inches square, and fold the square as described in (a) above; (b) lay the paper pattern on the material with the diagonal line of the paper on the diagonal crease in the stuff ; (c) pin the pattern to the stuff, and cut the curve and slopes truly and evenly ; (d) cut the band all in one piece, if possible, 24 inches long and 3 inches deep.

Note.-If the material is 36 inches wide you can get four bands off the width of the stuff, after you have torn off the 24 -inch square. If the material is flannel 28 inches wide, there will be only enough for one band off the width of the stuff.

## Cutting out a Pair of Child's Knickerbocker Drawers (Fig. 27)

1. Method of Cutting out in Paper.-(a) Take a piece of paper 16 inches long and 24 inches wide, and fold it into halves and quarters across the woof, and into halves and quarters and eighths down the length ; (b) open the paper and you will find three creases across the width and seven creases down the length; (c) fold the paper in half down the length and at the open edges (represented when the paper is open by IH and JK in the diagram, Fig. 27 ), draw a pencil curve from 1 inch beyond the first eighth crease to $\frac{1}{2}$ an inch above the first quarter crease, for the curve of the leg; ( $l$ ) cut this curve, being most careful not to curve inwards too much, and to begin by a straight line at I and J ; (e) open the paper and fold the top quarter AB into halves, so that each division will be 2 inches; $(f)$ fold from H in a slanting line to the half of the first quarter, and nearly to the first eighth crease, i.e.



Fig. 27.
$2 \frac{1}{2}$ inches in from G and down from F ; (g) cut along this


Fig. 28.
crease, keeping the line quite straight and not curving it in the least; ( $h$ ) cut in a straight line as far as L ; (i)
and then curve round and upwards to the edge of the paper to the first eighth at $\mathrm{E} ;(j)$ keep the edge of the paper straight from K to the second quarter, and then curve outwards and round to E , and the pattern of one leg is ready (Fig. 27).
2. Method of Cutting out in Material.-(a) Take a piece of material 32 inches long and 24 inches wide, and fold it in halves, so that it is 16 inches long, like the diagram, Fig. 27 ; (b) pin the paper pattern on the material, placing the line IJ on the folded edge of the stuff, and all parts of the paper pattern quite straight and even on the material ; (c) cut all the curves and slopes quite through the double material, if it is possible.

Notes.-1. By cutting in this way you get the leg slopes in one piece, and can get the false hems from these slopes, as shown in the diagram. The bands are all straight pieces cut with the longest sides down the selvedges. 2. You must cut along the folded edge J to I to separate the two legs, before you can make them up.
N.B.-Fig. 28 is the diagram of a woman's pair of drawers.

## 3. Dimensions of a Girl's Pair of Drawers, Twelve

 Years old.-(a) Length, 28 inches.
(b) Breadth, 32 inches.
(c) Length of leg, 12 inches.
(d) Body, 16 inches.
(e) Slope of leg at bottom, $7 \frac{1}{2}$ inches.
$(f)$ Slope of back of leg at the top, 4 inches.
(g) Slope in the middle of the leg, 4 inches.
(h) Slope of front of leg, 5 inches off the width and 2 inches off the length.
(i) Length of waistband = the measure round the waist, plus 2 inches for lapping.
N.B.-For other sizes, see author's Text-book of Tecllework, Kintting, and Cutting Out.

## PINAFORES

## Cutting out a Child's Pinafore

Materials needed.-From $\frac{3}{4}$ to 1 yard of holland or print from 30 to 36 inches wide, scissors, inch measure, tape strings, pins.

## The Lesson

Measuring, Folding, and Cutting out.-(a) Take a piece of material the length and breadth required, and fold it into halves and quarters down the length, and well


Fig. 29. press the folds to leave creases ; (b) place the fourfold doubled edges to your right hand (BD, Fig. 29), and fold the pinafore into thirds across the width; (c) if the pinafore is 27 inches long each third will be 9 inches long, and from B to E , which includes the shoulder-slope and length of the armhole, is $8 \frac{1}{2}$ inches, or nearly $\frac{1}{3}$ of the length ; put in a pin a little above the first crease across the material ; (d) fold the top third into thirds for the depth of the shoulderslope, which is $2 \frac{1}{2}$ inches from B to F , i.e. nearly $\frac{1}{3}$ of the first third, and put in a pin just above the topmost crease ; (e) fold the material in from $B F$ to $G$ to form a triangle, well press, and then open out, and cut off the triangle ; $(f)$ cut from $\mathbf{F}$ to E through the fourfold thickness for the length of armhole to nearly the first third of the length. (If the material is 36 inches long, to allow of a deep hem
and a tuck, you must fold the pinafore into fourths across the width, and a fourth of 36 inches will equal a third of 27 inches.) (g) Fold the top of the pinafore from $A B$ down to the first crease, which is 3 inches deep, and thus divide it into halves, or $1 \frac{1}{2}$ inches; this depth is necessary for the slope of the neck at the back; and then fold in a slanting line from A to G ; $(h)$ open the material, and cut in a straight line from I for a little more than $\frac{1}{3}$ of the width of the folded material at the back open edges, and then curve round to $G$; (i) fold and cut the slope of the front from the double edge $\frac{1}{2}$ an inch lower than the back, at first in a straight line and then gradually curve round to the $G$ at the shoulder, and the pinafore is cut out.
N.B.-This is a very simple pattern, easy to cut out and make up (Fig. 29). The age of the child would be from eighteen months to two years old.
Notes.-1. Pinafores are wider than they are long. The proportion is usually from once and a half to twice the length. 2. A breadth and a half of holland must be used for a pinafore for a child of from two to four years. The length must be decided by the height of the child. About $\frac{2}{3}$ of the height is a good rule.

## A Yoked Pinafore for Child of Three to Four Years old

Materials needed.- $1 \frac{1}{4}$ yards of print or muslin, scissors, measure, pins.

## The Lesson

1. Cutting out the Front.-(a) Take a piece of print 20 inches long and 28 inches wide, and fold it in half down its length; (b) then fold it into thirds down its length; ( $c$ ) open the material and measure down on the folded edges from E to I $2 \frac{1}{2}$ inches ; $(d)$ fold this $2 \frac{1}{2}$ inches in on the material to form a triangle, and a square when opened, and crease it well ; (e) then draw a faint pencil
curve from F to the bottom line of the square, that is $2 \frac{1}{2}$ inches in from $\mathrm{I} ;(f)$ cut from $\mathbf{F}$, beginning with a straight line, to this point for the armhole portions of the front, being careful to cut through the double material ; $(g)$ take up the material and carefully crease it from the under part of the armhole in a slanting line to the bottom, and cut this off.


Fig. 30.
Note.-You need not cut the material at the bottom as at J, but leave it to be shaped when the sides are joined together.
2. Cutting out the Backs.-(a) Take a piece of print 20 inches long and 30 inches wide, and fold it in half down its length ; (b) fold it into halves again, and then into quarters; (c) open it, so that it is twofold, and place the folded selvedge to your right hand ; $(d)$ measure down at $\mathrm{E} 2 \frac{3}{4}$ inches on the folded selvedge; $(e)$ then measure in from I $2 \frac{1}{4}$ inches for the armhole and side slopes; $(f)$
draw a pencil line lightly from $G$ to $H$, that is from the first quarter crease to the $2 \frac{1}{4}$ inches in, for the armhole curves ; $(g)$ cut from G to H ; ( $h$ ) take up the material and crease in a slanting line from $H$ to the bottom, and cut this off, leaving the bottom at I straight, as in the front.
3. The Yokes.-The yokes are all cut quite straight. (a) The front is 10 inches long and 3 inches wide; (b) the backs are each $5 \frac{1}{2}$ inches long and 3 inches wide; (c) the shoulder-straps are each 5 inches long and 3 inches wide. The length is the selvedge way of the stuff.

> Note.-You need not cut out any waistband or strings, because this pinafore is so often made up to hang loosely from the neck and shoulders.

## Cutting out a Yoked Overall

Children's overalls are generally from two and a half to three times as wide as they are long. They are best made of washing materials, and can be used as pinafores or frocks.

Materials needed.-For the size given, $3 \frac{1}{2}$ yards of print 34 inches wide, scissors, measure, pins.

1. Folding, Measuring, and Cutting out half of the Front in Paper.-(a) Take a piece of paper 29 inches long and 18 inches wide, and fold it into halves and quarters down the length, and press the folds well; (b) open the paper, and you will find three creased lines going down it, and each division of the paper will be $4 \frac{1}{2}$ inches ; $(c)$ look at the diagram (Fig. 31) and you will see that the width of the armhole slope is 4 inches, that is nearly as far as the first crease on the paper; ( $d$ ) measure down on the selvedge at your right hand 2 inches, that is from B to $\mathrm{J} ;(e)$ draw a curve from G to J for the armhole ; $(f)$ cut out this curve, and the front half of the pattern is done.
2. Folding, Measuring, and Cutting out half of the Back.-(a) Take a piece of paper 30 inches long and 18 inches wide, and fold it down its length into halves and quarters and eighths ; (b) look at the diagram of the back, and you will see that from B to H is $2 \frac{1}{4}$ inches, that is $\frac{1}{8}$
of the width ; (c) measure down at the left-hand selvedge from B to I 3 inches, or fold the paper across the width into ten parts, because the depth of the armhole is $\frac{1}{10}$ of the length ; (d) draw a curve from H to $\mathrm{I} ;(e)$ cut out the


Fig. 31.
curve ; $(f)$ from F to K is 10 inches, that is $\frac{1}{3}$ of the length for the opening down the middle of the back, so divide the back across the wilth into thirds to get this length.
I.B.-In this pattern the sides are kept quite straight.
3. Folding, Measuring, and Cutting out one Sleeve.-
(a) Take a piece of paper 20 inches long and 28 inches wide, and fold it down its length into halves and quarters; (b) fold the paper across the width into halves; (c) open the paper, and place the folded edge to your right hand, and draw the curved line for the upper arm from E to L , by beginning at the open edges at your left hand, 1 inch above the quarter crease across the width, and curving


Fig. 31-continued.
outwards, till you reach the centre crease down the length, and then curve round close to the top as far as the folded edge; (l) measure in from the open edges at your left hand, and at the bottom 2 inches, and draw a curved line from $H$ to $E$ for the side slope of the sleeve; ( $e$ ) turn the paper over, so that the open edges are at your right hand; $(f)$ fold the paper down its length into quarters ; (g) at 1 inch above the centre crease across
the paper draw a partly curved line from F to I, which is nearly to the first quarter crease down the paper; $(h)$ then curve inwards and upwards from I to J, keeping this curve half-way between the second quarter of the paper, and carrying it as far as the centre crease down the paper; (i) curve outwards and upwards to the top edge, so that this part of the curve matches that of the upper arm; ( $j$ ) cut out the side slopes by the drawn line, while the paper is folded; ( $k$ ) open the paper and cut the curves of the upper and under arm separately. This is the left arm sleeve, if material has a right and wrong side.
4. Folding, Measuring, and Cutting out the Cuff.Take a piece of paper 10 inches long and 10 inches wide, that is a square, and fold it in half down the selvedge, so that it is 10 inches long and 5 inches wide. This is the simplest cuff to remember.
5. Folding, Measuring, and Cutting out the Front Yoke.-(a) Take a 9 -inch square of paper, and fold it into halves and quarters, the selvedge way of the stuff; (b) if the paper is lined, put the paper on the desk, so that the lines go up and down, as the selvedge would do in a piece of striped print ; (c) look at the diagram, and you will find the neck is 5 inches wide, and the shoulder is 4 inches, and the centre crease divides the paper into $4 \frac{1}{2}$ inches on either side ; and the depth of the neck slope is 3 inches, that is $\frac{1}{3}$ of the depth of the stuff ; (d) fold the paper across its width into thirds, and press the folds well ; (e) open the paper, and draw the neck curve $\frac{1}{2}$ an inch from the centre crease towards your right hand, and then towards your left hand, down to $\frac{1}{3}$ of the depth of the paper, that is from G to $\mathrm{H} ;(f)$ draw the shoulder line from G to F , which is nearly as far as the first third of the depth ; (g) then curve from F out to D or 1 inch in from D , that is to E. The front half of the yoke is now ready for the left shoulder.
6. Folding, Measuring, and Cutting out one Back Yoke. -(a) Take a piece of paper 7 inches long, down the selvedge, and $8 \frac{1}{2}$ inches wide, and fold it in halves down the
selvedge ; (b) measure from the centre crease towards your left hand $\frac{3}{4}$ of an inch, and down the selvedge at your right hand $\frac{1}{2}$ an inch for the neck slope ; ( $\left.c\right)$ draw a line from F to G , and another from F to E (which is nearly as far as the first quarter crease across the paper) for the shoulder slope ; (d) cut out the neck curve and shoulder slope, and curve out a little for the armhole from E to D . You have now cut out the half back for the left arm. You must be most careful to face material that has a pattern, or the shoulders will not match.

Note.-The material for the front-and back breadths must be from 34 to 36 inches wide, so the breadths must be first folded into halves before the patterns are laid upon them. The armhole part of the pattern must be placed upon the open edges of the material. This pattern is large enough for a girl from ten to twelve years of age. For other sizes, see Text-book, and Needlework, Knitting, and Cutting out for Older Girls, Standards VI. and VII.

## BOYS' SHIRTS

Materials needed.-Oxford or calico shirting, white or unbleached calico, cricketing flannel or flannelette; pins, measures, scissors.

> CUTTING OUT A PLAIN SHIRT WITH SHOULDERSTRAPS, ETc.
> (For a Boy between Ten and Eleven Years of Age)
> The Lesson

1. Folding, Measuring, and Cutting out the Body.-(a) Take a piece of material 47 inches long and $22 \frac{1}{2}$ inches wide, and fold it across the woof, so that it is $22 \frac{1}{2}$ inches long on one side and $24 \frac{1}{2}$ inches long on the other side. (The shorter side is the front of the body, and the longer side is the back. Always remember to add 2 or $2 \frac{1}{2}$ inches to the length for the back of the body.) (b) Press the top folded edge well ; (c) notice that the body is a square, that
is the width is the same as the length of the front; $(d)$ fold the body into halves and then into quarters down the length, and fold it into thirds across the woof, as far as the length of the front of the body, and well press the folds; (e) one-third of the length of the front is the length of the armholes, one-third is the length of the sides, to be joined together, and one-third plus the 2 inches added to the back is for the flaps ; $(f)$ one-fourth of the width on each side of the selvedges at the top folded edge is just a little more than the length of the shoulders; ( $g$ ) measure with your inch-tape 4 inches in from the selvedges along the top folded edge to the $\frac{1}{4}$ creases, and put in pins; $(h)$ cut along this folded crease across the woof from pin to pin for the neck of the front and back of the body; (i) measure to the right of the centre crease on the front of the body $\frac{1}{2}$ an inch, and put in a pin; this is to make the left-arm side of the front at the neck wider than the rightarm side, because the left-arm hem is made wider and laps over the right-arm hem, and cut down 13 inches; $(j)$ the neck of the front must be sloped out, but it is better to do this after the neck gussets are set in. The body is now ready to be made up.
2. Folding, Measuring, and Cutting out the Sleeves, Sleeve Gussets, and Wristbands.-(a) Measure off two pieces of the shirting 15 inches long and $13 \frac{1}{2}$ inches wide, fold and crease, and cut carefully and evenly, and lay them aside ; (b) measure off two $4 \frac{1}{2}$-inch squares for the gussets at the top of the sleeves; $(c)$ measure and cut off a 2 inch square for the gussets at the wrist opening of the sleeves, and cut this square in half diagonally ; (d) measure and cut off two pieces of the material, each $7 \frac{1}{2}$ inches long and $3 \frac{3}{4}$ inches wide, for the wristbands, and fold and cut this material quite straight and even; (e) pin the two square gussets, and the two diagonal gussets, and the wristbands to the sleeves, and lay them aside.
3. Folding, Measuring, and Cutting out the ShoulderStraps and Neck Gussets.-(a) Measure and cut off two pieces of the stuff, each 7 inches long and 2 inches wide,
for the two shoulder-straps; (b) measure and cut off two 3 -inch squares for the neck gussets ; (c) pin these together and lay them aside.
4. Folding, Measuring, and Cutting out the Collar, Binders, Body Gussets, and False Hems for the Front Opening.-(a) Measure and cut off 13 inches long and 8 inches deep for the collar, which will be a turned-down one ; (b) measure and cut off two pieces of the stuff, each 17 inches long and 2 inches wide, for the binders ; (c) measure and cut off a 2 -inch square, and then cut it in half diagonally for the body gussets; (d) measure and cut off one piece of the stuff for the left-arm false hem 13 inches long and 2 inches wide, and another piece 13 inches long and $1 \frac{1}{4}$ inches wide for the right-arm hem. You have now cut out all the different parts of the shirt.
5. Curves.-Neck Slope.-When the neck gussets are sewn in, measure down from the top of the false hem on the front $1 \frac{1}{2}$ or 2 inches, and then cut straight across the false hems, and from 2 to 3 inches beyond them, and curve round to the gussets.

## Scale for a Reduced and an Enlarged Pattern of the same Shirt

(a) Rieduced size for boy between 7 and 8 years of age. (b) Enlarged size for boy between 14 and 15 years of age.

1. Body.-(a) Length of back, reduced size, 20 inches

(d) Length of armholes in both sizes $=\frac{1}{2}$ the length of the sleeve, or $\frac{1}{3}$ of the length of front of the body.
(e) Body flaps in both sizes. Front = the length of the armholes. $\quad B u c k=$ the length
of the armholes +2 or $2 \frac{1}{2}$ inches, because the back of a shirt is always longer than the front.
$(f)$ Length of the shoulders of body $=\frac{1}{6}$ of the breadth of the material in the body. In the reduced size the shoulders must be 3 inches long, and in the enlarged size $4 \frac{1}{2}$ inches.
(g) Length of the breast opening down the front in both sizes = the length of the collar.
(h) Slope of the front neck in both sizes $=\frac{1}{8}$ of the length of the collar.
2. Shoulder-Straps.-(a) Length $=$ the length of the shoulder of the body + the size of the neck gusset. In the reduced size the shoulder-straps must be 6 inches long, and in the enlarged size 8 inches.
(b) Width $=\frac{1}{3}$ of its own length.
3. Neck Gussets.-In the reduced size two 3-inch squares, and in the enlarged size two $3 \frac{1}{2}$-inch squares. In the reduced size the neck gussets are each $\frac{1}{3}$ the width of the body of the shirt, and in the enlarged $\frac{1}{8}$ of the width of the body.
4. Sleeves.-(a) Length $=\frac{2}{3}$ of the length of the front of the body, i.e. 12 inches in the reduced size, and 18 inches in the enlarged. (The sleeves must be longer, if needed.)
(b) Width = the length in both sizes. When gussets are used to widen the top of the sleeves, the width may be a little less than the length.
5. Gussets to widen the Sleeves.-In the reduced size two 3 -inch squares, i.e. squares $\frac{1}{4}$ of the collar length; and in the enlarged size two 5 -inch squares, i.e, squares $\frac{1}{3}$ the collar length.
6. Gussets to strengthen the Seams of Sleeves and Body. -In the reduced size diagonals of a 2-inch square, and in the enlarged size diagonals of a 3 -inch square.
7. Wristbands.-(a) Length $=\frac{1}{2}$ the length of the sleeve.
(b) Width $=\frac{1}{2}$ its own length.
(c) Wrist opening of sleeves $=\frac{1}{2}$ the length of the wristband on each side.
8. Collar.-(a) Length = size round the neck. In the reduced size the length would probably be 12 inches, and in the enlarged $14 \frac{1}{2}$ or 15 inches.
(b) Depth $=\frac{1}{2}$ its own length, before being doubled.
9. Binders.-(a) Length $=$ the length of the armholes + the width of the binder. In the reduced size 15 inches long, and in the enlarged 20 inches.
(b) Width $=\frac{1}{8}$ of the collar length $+\frac{1}{2}$ an inch for turnings.
10. False Hems. - (a) Length = the length of the breast opening $+1 \frac{1}{2}$ inches.
(b) Width. Left arm $=\frac{1}{8}$ of the collar length $+\frac{1}{2}$ an inch for turnings. Right arm $=\frac{1}{2}$ the width of the left-arm hem.

Notes.-1. Fig. 32 is a yoke-supported shirt, and lends itself easily to cutting out by folding, if you study the diagram. 2. The armholes, sides, and flaps of the body of a shirt, with neck gussets, can be sloped out in the same manner as in Fig. 32. The width of the neck will be narrowed if the armholes are sloped, and the neck portion will not have much fulness to be gathered. 3. In cutting out a garment like a shirt, or yoked overall, or nightgown, which have many different parts, it is a good plan to write the name of each part on a slip of paper, and sew the slips to each part as you cut it out. This will prevent mistakes when you are making up the garment.


Fig. 32.


Fig. 32-continued.

## CHAPTER IV

Construction.-Making up a Chemise, Pair of Diawers, Pinafore, Overall, Boy's Shirt

Stitches.-Gathers and Setting-in, Running, Coral and Feather-stitching, various kinds of Seams, Gussets, False Hems

Making up a Woman's Chemise, with Yoke Neckbands

1. Seams.- (a) Fix the gores by tacking the selvedges together, and then neatly seam ; (b) fix the sides with raw edges to within 9 or 10 inches of the top folded edge by sew-and-fell seam as follows : turn down one fold on the wrong


Fig. 33.
side of the garment about $\frac{1}{4}$ inch deep, then fold down on the wrong side of the opposite edge a fold $\frac{1}{2}$ inch deep, and turn upwards to the folded edge about $\frac{1}{4}$ of an inch to form the double fold or fell; place the folded edges together, as shown in the diagram (Fig. 33), and tack. Seam neatly on the right side, without puckering, and turn to the wrong side, and turn the fell down over the
raw edge of the one fold of the other side, and fell neatly.
2. Hem. - Fix a hem at the bottom, on the wrong side, from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch deep. You learnt how to fix a hem when you were a little child in the infant school, so you will know how to do this properly now.
3. Binders.-(a) Join the binders by placing the two selvedges together and seaming them for not less than 1 inch, and flatten the seams. You have now made the four pieces into two, which are false hems or linings; (b) place each along the sides of the armholes, with seamed edges downwards to the wrong side of the garment, and


Fig. 34.
the parts seamed below the armholes, and resting on the sew-and-fell seams; (c) it may be necessary to shape the outer raw edges like the sides of the garment, if so, you must cut the binders wider at first ; (d) the raw edges at the armholes must be even, and one fold must be turned down on each selvedge side, and at the bottom, below the seamed portion of each binder ; (e) tack close to the edge, and be most careful not to pucker the fixing ; the top raw edges must be quite even as well as the sides ; $(f)$ fell the binders neatly on the three sides, and put in a few extra stitches at the corners for strength. Take out the tacking stitches.
4. Gathers.-(a) The top part of the garment, front and back, must be narrowed to the length of the front and
back yoke neckbands ; and the first thing you must do is to divide the yokes into halves and quarters, and the tops of the chemise between the binders into halves and quarters, and mark these divisions by a few cross stitches. The divisions will enable you to set in the gathers regularly. (b) Turn down the chemise at the top $\frac{1}{4}$ of an inch on the right side, and well press the fold, and then turn the material back; (c) fasten on close to the binder on the creased line by a few backstitches very strongly, and then pass over twice as much as you take up on your needle (Fig. 34) ; (d) go on making long stitches on the right side of the garment, and short ones on the wrong side, drawing your cotton at intervals so as to push back the gathers or


Fic. 35.
folds to your right hand, till the other binder is reached; (e) take the needle off the cotton, and draw the gathers up, rather loosely at first, and wind the cotton round a pin.
5. Stroking.-(a) Begin at the left-hand side near the pin, and lift up each gather and push it under the left thumb, which you must move up and down on the gather to press or stroke it ; $(b)$ go on like this till your reach the fastening-on cotton, then turn the garment round, and stroke the gathers which lie above the gathering cotton ; (c) draw the gathering cotton more tightly, and re-stroke below and above the gathering cotton, pulling the gathers down towards you in a straight line; ( $d$ ) gather and stroke the other side of the garment in the same way (Fig. 35).
6. Making the Yoke Bands.-(u) Place the shoulders
together, and run and backstitch $\frac{1}{4}$ of an inch from the edges; (b) put the right sides of the shoulder seams together, and the curved and straight edges of the neck, edge to edge, and run and backstitch $\frac{1}{4}$ of an inch from the edge ; (c) then turn one yoke band over the other to hide the raw edges, and press up the join to form the folded edges ; $(d)$ turn down one fold $\frac{1}{4}$ of an inch deep along the selvedges on the wrong side, and then along the armhole portions of the yoke.
$N . B$.-The front part may be made open, if liked.
7. Setting in the Gathers.-(a) Place the yoke band


Fig. 36.
on the garment above the binder, in a line with the gathering cotton, and then take out the pin and spread the gathers, making the divisions on the band match those on the garment, and pin at intervals ; (b) tack the yoke to the garment; (c) fell that part which is resting on the plain part of the garment above the binder to the garment only, and then put your needle under a gather in a slanting direction close to the gathering cotton, and lift it up to the edge of the band, then draw your cotton down in a
straight direction, and lift up the next gather, and so on, till all are set in (Fig. 36) ; then fell the plain portion to the garment above the binder; ( $d$ ) the wrong side of the yoke must be fixed in precisely the same way, and the gathers set in as neatly, regularly, and particularly as on the right side. The band on the wrong side must be felled to the binders only.
N.B.-Both sides of the yoke band, i.e. the back and front of the garment, must be made alike, if gathers are used both at the front and the back. The front of the chemise can, however, be tucked, and then set into the band, and the back only gathered.
Notes.-1. Gathers, like pleats, are used to narrow a garment, and at the same time to give fulness. Gathers at the neck of a chemise gives fulness below the band, while at the legs of a pair of drawers the fulvess is above the bands. The fulness is below neck bands and above wristbands. 2. The gathering cotton must be very strong, and a little longer than the part to be gathered.
8. Tucks.-Tucks are used on the fronts of chemises, pinafores, overalls, nightgowns, blouses, and bodices (1) to narrow these garments, instead of gathers; and (2) at the bottom of frocks, pinafores, petticoats, drawers, etc., to shorten; and (3) to hide a join in a garment that has been mended, e.g. by putting a new piece of material at the bottom of a petticoat or skirt, or in widening a child's frock body. Method.- (a) Crease the front of the chemise down the centre, and then, with a cardboard inch measure, measure from the crease on either side $\frac{1}{4}$ of an inch, and put in a pin; this space is for the tuck to lie upon; (b) measure away from the pin $\frac{1}{2}$ inch to the left, and put in a pin, then fold this $\frac{1}{2}$ inch into halves, so that the tuck (or folded material) is $\frac{1}{4}$ inch deep; (c) press the top edge well, and take your measure, and prove by it that the tuck is $\frac{1}{4}$ inch deep all its length, which in the front of the chemise should not be more than 4 inches ; ( $d$ ) fold the tuck towards the centre crease, and press it well to leave a crease on its under part $\frac{1}{4}$ inch from the folded
edge; (e) tack the tuck along the crease for the length given above ; $(f)$ then measure to the right of the centre crease $\frac{1}{4}$ inch, and mark by a pin, then $\frac{1}{2}$ an inch, and make this half into double material $\frac{1}{4}$ inch deep, and fold it towards the centre crease, and press well; tack along the crease to the same length as the tuck to the left of the centre ; (g) run these tucks on the under part close to the tacking cotton, fastening on and off very strongly; take out tacking cotton, and press down the tucks firmly and evenly; ( $h$ ) measure away from each tuck $\frac{1}{4}$ of an inch for the space between them, then $\frac{1}{4}$ of an inch for the


Fig. 37.
tuck to lie upon, and then $\frac{1}{2}$ an inch for the double material $\frac{1}{4}$ inch deep to form the tuck (Fig. 37). Make each tuck as you near the binders $\frac{1}{4}$ inch shorter than the preceding one, so as to graduate the length towards the shoulders. This must always be done in the fronts of garments. You must constantly measure the garment by the length of the band, while you are tucking the front, in order to make them match in length. The band must be felled on the right and the wrong sides over the tucks, $\frac{1}{4}$ inch below the top edge of the garment.

Note.-Tucks make the front of a garment prettier and warmer than gathers. Tucks must always be folded on the right side of a garment. Tucks vary in depth, and the spaces between them vary with the dep,th of the tuck. If the tucks are all
$\frac{1}{4}$ inch deep, $\frac{1}{4}$ inch must be left between each; if they are very narrow, the depth of the tuck may be left between each ; if wide, $\frac{1}{4}$ or $\frac{1}{3}$ or $\frac{1}{2}$ of the depth of the tuck. Tucks are often made in sets, with a wide space between the sets, and they are also made without spaces between them, the folded edge of the tuck just touching the running stitches of the preceding one. When wide spaces are left between sets of tucks, featherstitch is worked in rows to ornament the spaces. Featherstitch is also frequently used on flannel garments to fasten down the tuck, and is worked on its upper side.
9. Running Stitch.-_Fasten on by a few backstitches


Fig. 38.
on the under part of the tuck, and then pass over a small piece of the material, and take up a little bit more than this piece on your needle, pushing the needle well through the double material. The stitches must be seen distinctly on the upper as well as under sides of the tucks. The rule for running is "take up two threads and pass over two threads," but it is a rule that cannot be kept if the running is to be regular and strong. Fig. 38 shows the running stitch, and tucks fixed and run above a hem.
10. Stitching.-The neck edge of the yokes should be stitched or feather-stitched $\frac{1}{4}$ of an inch below the top edges. They may also be stitched or feather-stitched in rows along the bands, for ornamentation.
11. Sleeves.-The slanting lines of the sleeves (Fig. 22) must be fixed to match the seams in the body of chemise, i.e. by sew-and-fell. The outer armhole must be finished off by a hem about $\frac{1}{2}$ inch deep, and the inner armhole must be placed between the chemise and its binder and the yoke and its lining, the seam of the armhole matching the seam in the chemise, and lying quite flat between the double material. Fell the right side of the garment and the yoke to the sleeve, and then turn to the wrong side, and fell the binders and the linings of the yoke over the stitches on the sleeve. This part of the construction needs skill and care, to prevent any puckering. The edges of the hems of the sleeves can be stitched or feather-stitched. The garment and the yoke can be stitched to the sleeves instead of felled.

Note. -If the garment is cut down the front, the yoke needs more fixing and sewing, and a front, fold must be placed on the garment. The above is more quickiy made, and is a very useful garment, and no buttons or holes are required.
12. Trimming.-The edges of the neck and sleeves can be trimmed with crochet edging or everlasting edging; crochet edging must be sewn on a little full, like lace on the infant's shirt, and the everlasting edging must be felled by its webbing on the wrong side.

## Making up First-Size Drawers

Materials needed.-The garment and band (Fig. 26), tape strings, the length of the waistband plus $\frac{1}{4}$ yard, and $\frac{1}{2}$ yard of tape for strings at G, sewing needle, and cotton, and tacking cotton, and trimming.

## The Lesson

Construction.- (a) D to H is the waist portion of the garment, and must be gathered or pleated from D to I , which gives the fulness to the back of the garment;
(b) line all the edges of the garment, except D to H , with narrow false hems cut on the cross $\frac{3}{8}$ of an inch wide, when all turnings are taken, and neatly hem.
N.B.-If embroidery is used to trim the legs, place it between the false hems and the garment, rather full, from E to F . If whipped frills are used as trimming, sew these to the edges of the curves E to F .
(c) Sew a tape string $2 \frac{1}{2}$ inches long at point C , and stitch it to the garment, on the right side, $2 \frac{1}{2}$ inches inwards; (d) work two buttonholes, one at each corner E, placing a piece of broad tape on the single calico, so that the hole may be worked on double material, and two buttons at each corner F ; (e) sew two tape strings 9 inches long at each corner $G ;(f)$ make the band in the usual way, and stitch it at the top edge, and stitch two parallel rows across it in the middle to form a string casing, leaving this portion of the ends of the band unfastened, to allow of draw strings.
N.B.-This garment can be easily put on and taken off. The strings at corner $G$ are passed through the loop of tape at corner C.

Construction of Children's Flannel or Flannelette Drawers (Fig. 27)

1. Seams.-As for flannel petticoat, or fixed for counterhem, and stitched at each edge, on the right side of the garment.
2. Hip-openings.- (a) These may be finished off by hems taken from the garment itself, herring-boned, and strengthened at the end of the slit by a tape or gusset; (b) or by false hems of flannel, or sateen, or turkey twill, like the waistbands, which all match the flannel or flannelette in colour.
3. Waistbands.-(a) These can be made of the flannel or flannelette, but are better if made of good sateen, turkey twill, or unbleached calico; (b) the material of
garment must be managed as described above, only instead of gathering, the fulness must be pleated into the bands, and the bands properly matched in the divisions, and stitched at the edge over the pleats on the right side, and felled on the wrong side.
N.B.-Or felled on both sides, care being taken to prevent puckering the bands.
4. Leg-bands.-(a) The edge of the legs may be scallọped


Fig. 39.
and worked with embroidery stitch ; (b) from 1 to 2 inches from the edge of the scallops, pleat the fulness to the length of the leg-band which is required, leaving a plain piece on
either side of the leg seam, to prevent the garment dragging at the knee ; (c) tack the pleats, then lay over them, on the right side, the leg-band, which must be made of single material, the raw edges being turned in once ; (d) tack the band as evenly as possible, and stitch, or fell it, on either side to the leg ; (e) ornament the leg-bands by a row of feather-stitch along the middle of them (Fig. 39).
N.B.-1. If the embroidery forms a part of the leg, then the legs must be cut a little longer at first.
2. If, however, the fulness is pleated into a band, the trimming may be flannel embroidery, placed between the edges of band. This is a longer method, and more bulky than that given above, and the legs must be cut shorter at first.
5. Buttonholes.-These would be the same in number, and would be placed in the same position, as in a calico garment.

Note. - Open Drawers.-Girls generally begin to wear open drawers when they are about nine or ten years old. Open drawers are not cut down at the hips, and the band is made all in one piece of the material. The backs and fronts of the legs are not joined together, but hemmed separately, or lined with false hems. The fronts, in children's sizes, are seamed together for about 2 inches, in women's sizes a little more. A button and buttonhole are placed at the ends of the bands, or two tape strings. The legs may be constructed as for closed drawers, i.e. as knickerbockers with bands, or they may be made up with a deep hem, and narrow tucks above. The drawers are gathered or pleated into the bands at the waist and legs. Women's drawers are very seldom made up as closed, but nearly always as open.
6. Construction of Calico Drawers.-(a) Join the legs by sew-and-fell, run-and-fell, or counter-fell seams ; (b) hem the backs and fronts of the legs separately, or line with false hems cut on the cross ; (c) join the front hems of the legs at the top by a seam about 2 or $2 \frac{1}{2}$ inches long; (d) gather or pleat the legs into one waistband, taking care to put most of the fulness to the middle of each leg; (e) gather or pleat the legs into knee-bands, being
careful to leave a portion plain on either side of the leg seams; $(f)$ or, fix a hem and a few narrow tucks ; ( $g$ ) sew on two tape strings, or a button, and work a buttonhole. If closed drawers, put straight false hems at the hip openings, or narrow hems, and gussets at the end of the slits. (See lessons on False Hems, and Gussets.)

Making up a Simple Pinafore (Fig. 29)
Method.-(a) Join the shoulders by sew-and-fell, run-


Fig. 40.
and-fell, or counter-fell ; (b) fix a hem from $\frac{1}{2}$ to $1 \frac{1}{2}$ inches deep at the bottom ; (c) run two tucks above the hem, if you can afford the length of material ; (d) fix narrow hems at the armholes, and strengthen the ends of the shoulder seams and armhole slits by narrow-shaped tapes (see lesson on Strengthening Tapes); (e) fix a hem $\frac{1}{2}$ inch deep at the neck; $(f)$ run a narrow tape through this hem, and stitch two parallel rows on the right side of the neck hem in the centre, to prevent the tape being drawn out; ( $g$ ) finish off the ends of the tape by very narrow hems, or by a buttonhole stitch; ( $h$ ) trim the armholes
with crochet edging, or everlasting edging, or by a pleated frill of the same material; ( $i$ sew on two or more tape strings at the edges of the backs, the first set being $\frac{1}{4}$ of the depth of the pinafore from the top.

Note.--Fig. 40 gives the appearance of Fig. 30 when made up. The waistband and strings are more generally used for boys' pinafores than for girls'. If the pinafore is made of muslin, join the sides by mantua-maker's hem. (See lesson on this.)

JOINING MATERIAL ON THE STRAIGHT, ON THE CROSS, AND ON THE CURVE, BY VARIOUS KINDS OF SEAMS

## Mantua-Maker's Hem

Use.-Mantua-maker's hem is a quick and useful method of joining the sloped sides of muslin and print pinafores,

Hem


Fig. 41. skirts of white calico, and cloth petticoats, bags, and sleeves that have no linings.

Method. - (a) Turn the garment to the wrong side, and place one raw edge a little below the other ; (b) turn the upper edge over the lower one twice, as in fixing a hem, and hem through all the thicknesses. The stitches are only seen on the wrong side (Fig. 41).

## Bodice Seams

Use.-(a) To join the slanting and curved sides of a calico bodice, frock bodices, skirts of petticoats and dresses, watch and dress pockets; (b) for materials that fray very much, e.g. serge, which is not strongly enough protected by overcasting.

Method.-(a) Place the two raw edges quite even on the right side, and tack about $\frac{1}{4}$ of an inch deep; (b)
run and backstitch neatly and firmly just above the tacking thread; (c) take out the tacking thread, and turn the garment to the wrong side ; $(d)$ press up the edge that


Fig. 42.
has been fastened by the run-and-backstitch, and tack just below the raw edges, which are on the wrong side, i.e. about $\frac{1}{4}$ of an inch deep; (e) run and backstitch or machine-stitch along by the tacking threads. The stitches are not seen on the right side (Fig. 42).

## Counter-Henining or Felling

Use.-For joining material on the straight and the curve, e.g. sides of pinafores, shifts, shirts, shoulders of infants' first shirts, and of children's pinafores. Counterhem is a good way of fixing the seams of materials where sew-and-fell or run-and-fell would be too thick, e.g. flannel, flannelette, as well as in fine and semi-transparent materials like muslin.

Method.-(a) Place the two wrong sides of the material together edge to edge; (b) turn down towards yout $\frac{1}{8}$ or $\frac{1}{6}$ or $\frac{1}{4}$ of an inch on the right side of the material ; (c)
move the piece lying uppermost away, and you will find the turning on this is on the right side of the stuff, and the turning on the other edge is on the wrong side ; $(d)$ place the edge which has the turning on the right side under the other edge, so that the raw edges are completely hidden and yet not rolled ; (e) tack along the centre ; $(f)$ hem the fold on the right side, and then the fold on the wrong side. This makes a very flat seam. The edges can be stitched on the right side instead of being hemmed.

## RUN-AND-FELL SEAM

## Remarks

1. A run-and-fell seam is used instead of a sew-and-fell, and, if it is properly worked, it is quite as strong and neat as a sew-and-fell seam.
2. A run-and-fell seam is more quickly fixed and worked than a sew-and-fell, and it is very suitable for fine soft materials such as muslin, fine calico, and silk.
3. A run-and-fell, like a sew-and-fell, is placed at the side seams of garments, and also across the woof, as when repairing a garment, by putting a new top or bottom to it.

Materials needed.-Two pieces of calico or muslin, sewing needle, tacking and sewing cotton, pins.

## The Lesson

1. The Fixing.-(a) Find the selvedges of the two pieces, and mark by pins; (b) take one piece and turn down along one of the selvedge sides a fold $\frac{1}{4}$ of an inch deep, and press the folded edge firmly and evenly ; (c) turn this fold upwards, so that you can see the crease ; (d) take the second piece of material, and lay one of its selvedge sides just below the crease, and parallel to it ; (e) turn the fold of the first strip down over the second piece, which
is lying above it, without rolling its raw edge; $(f)$ press this fold down evenly and firmly (Fig. 43).
2. Tacking.- (a) Begin to tack at the right-hand side, just above the raw edge of the fold (Fig. 43) ; (b) you must tack quite through the three thicknesses very neatly and securely.
3. The Stitches.-Running.-(a) Begin to run at the right-hand side just below the raw edge of the fold ; $(b)$ fasten on as for gathering stitch, and proceed with the running


Fig. 43.
stitch as you were taught when running tucks (see Lesson on Tucks, and Diagram of Running, Fig. 43) ; (c) you must make a backstitch at certain regular distances in the running, in order to make the seam firm and secure.

Note.-If the running is not taken quite through the double material, and if it is carelessly done, there will be gaps in the seam.
(d) When you have finished the running stitch, fasten off by a few backstitches neatly and securely.

Felling.-(a) Turn the fell down smoothly and eventy to hide the raw edge, and draw down the underlying
material, and press the folded edge well on the right side, in order to flatten it, and to prevent wrinkles at the edge of the seam ; (b) fasten on strongly and neatly, and fell the fold as neatly and regularly as possible.


Fig. 44.
Note.-Both the seam and the fell must be beautifully flat and straight, and there must be no slip stitches in the running or the felling. Fig. 44 gives the finished appearance on the right side.

## FALSE HEMS

## A. On the Straight

Use.-To form a lining as well as a hem, where a narrow hem would not be a sufficient protection to the edges.

Method.-(a) Compare the length of the false hems with the length of the slit on the garment, adding to this length $1 \frac{1}{2}$ or 2 inches for (1) lining the garment below the slit; (2) for a turning to the hem, and for (3) shaping at the waist (drawers) or neck (chemise, nightgown, shirt); (b) the false hems should be cut into two separate
strips, and should not be less than $\frac{3}{4}$ of an inch wide when fully completed. To allow of turnings for the hem and join at the end of the slit, each strip must be $1 \frac{1}{4}$ inches wide for hip opening of drawers, and wider for the front of chemises, nightgowns, and shirts if necessary; (c) place the two raw selvedges together quite evenly, and tack $1 \frac{1}{2}$ inches at one end, about $\frac{1}{6}$ or $\frac{1}{4}$ inch from the edge ; (d) run and backstitch this $1 \frac{1}{2}$ inches, or, as it is better to open this seam, stitch entirely for the sake of strength ; (e) open the seam, and well flatten it; $(f)$ fix the hems to the slit'in the garment thus :-place the right side of the garment uppermost, and then lay the right side of the false hem on the garment, placing the joined portion of the false hems well below the slit, with all the edges quite even; tack the same distance from the edge to match the join in the false hems; run and backstitch the false hems to the sides of the slit, and as far as the end of it, without any puckering; cut the false hems at the top to match the curves or slopes in the garment ; turn the false hems over to the wrong side of the garment, pressing the joined edges of the slit, and drawing over to the wrong side a small portion of the garment so as to hide the join; tack the edges of the slit; turn down folds on the selvedge sides of the hems first, and then a fold at the bottom, and pull the false hems into a straight position, being careful to see that both are the same in width ; tack the hems quite straight and even, and then neatly hem on the wrong side, or machine-stitch on the right side. Finish off the end of the slit by a few buttonhole stitches, drawing any fulness on the garment towards this part. Take out the tacking cotton, and press the hems, to make them lie flat and smooth.

## b. On the Cross

Method.-1. Cutting the Material on the Cross.-(a) Take as large a square of calico as you can get from the neck
sloping of the chemise, and fold it diagonally from corner to corner ; (b) cut along this diagonal crease.
2. Depth of Crosswise Hems.-(a) When velvet, or crape, satin, or plush, is bought already cut on the cross, it is measured along the selvedges; but in taking what is wanted from the crosswise stuff for trimmings, it must always be remembered that the depth of the material is less from its slanting edge inwards, than it is along its selvedges ; (b) the hem of a woman's chemise should be $\frac{3}{4}$ of an inch deep, when finished, and $\frac{1}{2}$ an inch more must be allowed for turnings to the hem, and for joining it to the garment, so that the depth of crosswise hem must be 1. $\frac{1}{4}$ inches ; (c) measure along the selvedges 2 inches, or from the crosswise edge of material inwards $1 \frac{1}{4}$ inches, crease this evenly, and, as more than one piece is likely to be needed, fold the required depths one above the other, to prevent waste of time in re-measuring; $(d)$ lay your left hand on the material, and cut along the creased edges very carefully.
3. Joining the Crosswise Material. - (a) Compare the crosswise lengths of material, and find out if the threads are all going in the same direction, either all to the right

## Open Seam



Fig. 45. or all to the left; (b) make ends match, by cutting away any portions of material which prevent matching; (c) face the two strips of material, and put the long points to the short ones, so as to keep the depth of both pieces the same when joined (Fig. 45); (d) run and backstitch the strips together $\frac{1}{6}$ of an inch below the edges ; (e) turn back the upper strip, and press the seam (Fig. 45).
N.B.-In calico the seam should not be opened, but in velvet, crape, cloth, the join should be flattened, damped, and then 1 ressed with a hot iron.

## CONSTRUCTION OF AN OVERALL

## (With Sleeves)

Materials needed.-The front and two backs of the skirt; the front and two back yokes, with the linings of the same, either in calico or in the same material; two sleeves and two cuffs; needle, sewing and tacking cotton, pins. (Trimming for the neck and the cuffs.)

## The Lesson

1. Joining the Front Breadth to the Backs of the Skirt.-Seams.-Join the sides of the backs to the front, either by sew-and-fell or run-and-fell seam, or by counterfell (or mantua-maker's hem), if the material is thin, like muslin. A mantua-maker's hem is made as follows :face the right sides of the material, and hold the wrong side towards you; begin at the top of the seam at IJ, and put one raw edge $\frac{1}{4}$ of an inch below the other ; then turn down this $\frac{1}{4}$ of an inch over the raw edge of the side lying uppermost, and then turn the threefold material down again for $\frac{1}{4}$ of an inch, thus forming a hem. Hem through all the thicknesses of the material. (The stitches will only be seen on the wrong side.)
2. Hems.-(a) Fix a hem, $\frac{3}{4}$ or 1 inch wide, on the right-arm side of the placket, from $A$ to $K$, and a narrower hem on the left-arm side, from A to K ; (b) lap the wide hem over the narrow one, and stitch two rows across the bottom of the placket at K ; (c) fix a rather wide hem at the bottom, being careful to match the seams on the hems with the side seams. The bottom hem should be $1 \frac{1}{2}$ inches wide, at least.
3. The Yokes.-If unlined.-(a) Face the right sides of the material, and put the shoulders of the backs to the shoulders of the front, and join by run-and-fell or counter-
fell seam ; (b) turn up one fold along the straight edges at the bottom of the front and the backs.

If lined with Calico, or the same Material.-(a) Face the right sides of the material, and put the shoulder slopes of the back yokes to the shoulder slopes of the front yoke, edge to edge, and run and backstitch in an even line $\frac{1}{4}$ of an inch below the edges; (b) open and flatten the seams; (c) join the shoulders of the lining in the same way, and flatten the seams; ( $d$ ) place the right side of the lining to the right side of the yokes, shoulder seam to shoulder seam, and put in pins; (e) then place the straight edges of the backs together, and tack the lining to the backs and neck; $(f)$ run and backstitch $\frac{1}{4}$ of an inch from the edges along the straight sides of one back, then round the neck, and down the second back; $(g)$ take out the tacking cotton, and lay the lining over to the wrong side of the yokes, being careful to push up the top corners, where the sides of the backs form the beginning of the neck.
> N.B.-If the lining is of the same material as the garment, and has a pattern on it, the pattern side must be the outer part on the wrong sides of the yokes.
(h) Turn down $\frac{1}{4}$-inch folds along the bottom straight edges of the front and back yokes, and round the armholes; ( $i$ tack the yoke to the lining across the shoulder seams, round the armholes, and at the bottom sides, to keep it flat and smooth and in place. The yoke is now ready for fixing on the skirt.
4. Gathering the Top of Skirt. - The Front and Backs.-(a) If the yokes are not lined, you must turn down a fold $\frac{1}{4}$ inch deep on to the right side of the material ; (b) measure away from each side of the armhole on the front, and on each back at least 1 inch, and mark by a pin; (c) then fold the front into halves and quarters between these pins, and the backs into halves and quarters between the hems and the pins, and mark these divisions by a few backstitches.
N.B.-1. The piece measured off on either side of the armholes must be kept plain. 2. If the yokes are lined, you must not turn down a fold along the top edges of the skirt, becanse these edges would be placed between the yoke and its lining.
(d) Gather the top of the front and the backs just below the turned-down fold, or $\frac{1}{4}$ of an inch from the top raw edge. Be careful not to gather across the hems of the back. Stroke the gathers below and above the gathering cotton.
5. Fixing the Yokes to the Skirt, and Setting in the Gathers. - (a) Fold the yokes into halves and quarters, and mark the divisions by a few backstitches; (b) if the yokes are unlined place them over the turnings on the top of the skirt, so that the folded edges of the yokes lie just above the gathering cotton; but if the yokes are lined, then place the raw edges of the skirt between them and the lining, matching the divisions of the halves and quarters, and letting the edges of the yokes lie above the gathering cotton; (c) set in the gathers neatly and correctly, on the right side, and then on the wrong side.
6. Making the Sleeves.-(a) Join the sides of the sleeves either by run-and-fell or counter-fell seam, or by a mantua-maker's hem ; (b) measure off on either side of the seam at the wrist 1 inch, and keep this quite plain; (c) fold the wrist portion of the sleeve into halves and quarters, and mark by a few backstitches; ( $d$ ) gather the sleeve and neatly stroke below and above the gathers; (e) fold the upper arm of the sleeve from L to within 1 inch of E into halves and quarters ; $(f)$ turn down a fold on to the right side of the sleeve and all round the top portion of it ; (g) gather from 2 inches above E on the upper arm, as far as K, and neatly stroke.
7. Making the Closed Cuff.-(a) Put the edges represented by A, B, C, D in Fig. 31 together, with the wrong side of the material towards you, and run and backstitch for $\frac{1}{4}$ of an inch below the edges; (b) fold the cuff into halves, so that all the raw edges are hidden, and it is

3 inches deep, and see that the seams lie one above the other; (c) turn down a fold $\frac{1}{4}$ inch deep all round the cuff, and measure off on either side of the seam 1 inch; (d) fold the cuff into halves and quarters, and mark by a few backstitches.
8. Setting the Gathers into the Cuff.-(a) Place the join in the cuff to the side seam of the sleeve, and then put the raw edges of the sleeve at GH between the edges of the cuff, pinning the plain portion to the cuff, on either side of the seam; (b) then match the halves and quarters, and pin the cuff to the sleeve, regulating the gathers as you tack; (c) set in the gathers neatly and accurately on the right side of the cuff, and then on the wrong side. Be most careful not to pucker the gathers.
9. Setting in the Sleeves at the Armholes.-(a) If the yokes are not lined, the one fold, which you have turned down on to the wrong side on the yokes, and the armholes of the skirt, will, with the turnings on the sleeves, form counter-fells; (b) place the seam in the sleeve to the seam at the side of the skirt, and the sleeve under the garment, so that all the raw edges are hidden both on the right and wrong sides; tack the plain portions of the sleeve on either side of its own seam to the armhole portions of the skirt; (c) fold the front and back yokes into halves and quarters, to match the divisions in that part of the sleeve, which is gathered; (d) put the gathers to the shoulder seam, and to the front and back of the yoke, and regulate them as you tack the yokes to the sleeve; (e) set the gathers in accurately, and fell the rest of the garment to the sleeve, on the right side, being careful to fasten the seam very strongly and neatly; $(f)$ turn the wrong side of the garment towards you, and fell the sleeve to the garment all round, taking care to make small pleats at the top of the sleeve, and to fasten these down while felling, and to fell the seam in the sleeve neatly and strongly to the seam in the garment; $(g)$ if the yokes are lined, you must stitch near the edges of the
yokes, which you have previously fixed and tacked together, and then set in the sleeve as described above, felling the gathered portion of the sleeve to the linings of the yokes. The setting in of the gathers will be a little more difficult to do, because the edges of the yokes will be double. The other sleeve must be set in, in the same way.
10. Trimming the Neck and Cuffs.-(a) If you trim the neck of the garment with wide Everlasting Edging, you must place the wrong side of the trimming to the wrong side of the garment, near the edge of the neck, and put in small pleats to make the trimming full, and tack neatly; (b) turn down narrow hems at the ends of the trimming, which really forms a turned-down collar, and hem neatly, being careful to seam the corners; (c) fell the collar to the linings of the yoke; $(d)$ then turn the collar over the edge of the neck, and let it lie on the right side of the yoke; (e) run or stitch the trimming on the right side to the yoke, just below the edge of the neck; $(f)$ the trimming for the cuffs must be joined by placing the two raw edges together, and then fastened by a run-and-backstitched seam; (g) place the wrong side to the wrong side of the cuff, and put in small pleats to give a little fulness, then tack and fell on the wrong side, just below the edge of the cuff; ( $h$ ) turn the trimming back over the cuff on the right side, and either run or stitch it to the cuff, just below the edge, being careful to pleat the fulness neatly.

> Notes.-1. If the trimming is embroidery, you must turn down a fold of the plain portion of the stuff to hide the raw edge. Everlasting Edging has a tight self edge on the webbing attached to it. 2. Trimming makes the garment more expensive, and takes more time in the making up, but it improves the appearance of the overall.

CONSTRUCTION OF A SHIRT WITH SHOULDER-STRAPS (Fig. 46)

1. Seams in the Body.-(a) If one side has selvedges,
seam these together for about one-third of the length of the garment. (The middle third will be the side seams.) (b) Fix the side with the raw edges, either for sew-andfell, run-and-fell, or counter-fell seam. If the material is flannel, you must join the sides by run-and-backstitch and herring-bone stitch.
2. Hems.-(a) Fix narrow hems down the body opening, and hem, or fix one fold and herring-bone, if the material is flannel ; (b) fix narrow hems along the bottom, to match the hems on the opening.
3. Body Gussets.-Set in triangular gussets, with a hexagon lining, at the end of each seam, so that you will carry into practice on a garment the gusset-making you may have previously learnt on strips of calico. (See Lesson on Gusset-making.)
4. Binders.- (a) Fold the binders in half, so that they are $8 \frac{1}{2}$ inches long, and join the raw edges together for a little more than an inch by run-and-backstitch, and press the join flat and smooth; (b) place the binder with the crease in its folded edge to the shoulder crease, and with the wrong side of its seam to the wrong side of the side seam of - the body ; (c) be careful to fix the binder quite straight on the garment; $(d)$ turn down a fold $\frac{1}{4}$ inch deep on the selvedge side of the binder lying on the garment, and fix a fold of the same depth across the bottom of the binder, being careful to press the turning well, where the binder is joined at the end of the armhole ; (e) turn down a fold on the binder at the armhole edge, and another fold on the armhole of the body, and tack the binder to the body $\frac{1}{4}$ of an inch from the edges of the armhole, and then tack the binder along its folded inner edge to the gar-. ment; ( $f$ ) fell the binder all round to the garment. If calico binders are put round the armholes of flannel and flannelette garments, they must be fixed and sewn to the garment in this way. Put the outer binder on in precisely the same manner, and be most particular with the fixing, to prevent puckering.
5. Neck Gussets.-(a) Fix narrow folds on the squares
which have been cut for the neck gussets, making the first folds on the selvedges, and the second across the woof; (b) fold the squares corner to corner and well crease them diagonally; (c) place a corner of the square well in on the shoulder crease, and pin it to the garment ; $(d)$ tack the two sides of the square from this corner, so that the gusset is now a triangle in shape ; (e) stitch along the two sides of the gusset ; $(f)$ turn to the wrong side, and place the other triangle, with one corner and the crease across it on the shoulder crease, and fell the gusset to the garment, covering the stitches which show through from the right side. Great care and nicety are required in fixing the neck gussets. The other gusset must be set in, in the same way.
6. The Shoulder-Straps. - (a) Fix folds along the selvedges of the shoulder-straps; (b) fold them in halves along their length, and well press the folds ; (c) place the crease in them on the creases at the top folded edge of the garment, along the shoulders, and pin them to the garment; (d) put the edges of the woof portion of the straps to edges of the garment, after you have turned down a fold, to match the turnings on the armholes, and the raw edges to the folded edge of the gussets ; (e) tack along the selvedges of the straps, being careful to tack them to the garment only, and not through the binders as well as the garment; $(f)$ stitch the shoulder-straps to the garment and the gussets, being most careful to keep the crease in the straps in a line with the creases in the shoulders and gussets; (g) take out the pins and tacking cotton.

## 7. False Hems on the Breast Opening of the Front.-

 (a) Place the selvedge of the narrow false hem along the selvedge of the right-arm side of the breast opening, edge to edge at the neck and side of the opening, on the right side of the garment ; (b) put in pins ; (c) take your scissors and cut across the woof of the front of the shirt as far as the width of this hem ; ( $l$ ) tack the false hem $\frac{1}{4}$ of an inch from the edges to the garment, and then run-and-backstitch along by the tacking cotton from the bottom of the opening to the neck; (e) turn the false hem to the wrong side of the garment, and fix a fold along the other selvedge side, and at the bottom across the woof ; $(f)$ tack the fold to the garment, and then hem it, as well as the portion which goes down below the breast opening, on the wrong side of the garment ; (g) place the wider false hem with its selvedge to the left-arm opening of the front, edge to edge, and on the wrong side of the garment, and put in pins; (h) cut along the woof at the bottom of the opening towards the left armhole the width of this hem. This cut piece of the body must be made into a box pleat at the end of the breast opening, after the false hems are finished. (i) Tack the false hem to the garment from the end of the opening to the neck $\frac{1}{4}$ of an inch from the edges; $(j)$ then run-and-backstitch the false hem to the garment; ( $k$ ) take out the tacking cotton, and fold the false hem over to the right side of the garment; (l) fix a fold on the other selvedge side, and across the woof at the bottom of false hem, and tack the hem to the garment, being careful to let a portion of the hem form the outer edge of the opening; $(m)$ stitch the edge of the fold to the garment, and then stitch the outer edge to make it look like a pleat; $(n)$ take up the cut material at the bottom of the opening at the centre crease on the front of the shirt, and pleat it to the right and to the left, to form a box pleat, and then tack across the pleat; (o) lap the left-arm hem over the right-arm hem, so that the centre of the hem lies on the centre crease in the garment, and then pin it in position, and put in a few tacking stitches to keep it firmly in place, and take out the pins. The false hem will be longer than the breast opening, and will cover that part of the garment which you cut to form the box pleat, but it will not be wide enough to cover this pleat across the width, so after you have felled the false hem to the garment, you must further strengthen the end of the opening by putting a band of the material well over the pleats on each side, and stitch it to the garment,
and a straight strengthening tape on the wrong side to hide any raw edges, and to make this part of the garment very neat and strong.
8. Slope of the Front Neck. - Take your scissors and curve out the neck from the gussets to the false hems for $1 \frac{1}{2}$ inches below the top of the false hems, keeping this slope straight across the hems and a little way beyond them, and then curving round to the gussets. You can slope out more than $1 \frac{1}{2}$ inches, if you think it will be necessary.
9. The Collar.- (a) Turn down $\frac{1}{4}$-inch folds along the selvedges and woof edges, and fold the collar in half along its length; (b) tack the ends, and then seam them; (c) fold the band into quarters down its depth, and well press the folds; (d) gather the neck from false hem to false hem, and quite through the shoulder-straps and the gussets under them, being careful to divide the parts gathered into halves and quarters for the better regulating of the gathers; (e) stroke the gathers; $(f)$ fix on the collar by placing one-fourth of each end to each side of the front neck, as far as the gusset, then two-fourths from the beginning of one gusset to the end of the other. You may sometimes be obliged to put less than two-fourths of the collar to the shoulders and neck gussets, and a little more than one-fourth to each side of the neck in the front of the shirt, ( $g$ ) When you have set the gathers in both on the right and wrong sides, you must stitch the collar about $\frac{1}{4}$ of an inch from the edges at the ends, and along the top, on the wrong side of the garment, so that when the collar is turned down on to the right side of the shirt the stitching will be seen.
10. Buttons and Buttonholes on the Front.-Cut a buttonhole the selvedge way of the collar, just above the left-arm false hem, and three buttonholes on the hem, the selvedge way of the stuff, at equal distances apart, to fit the buttons, which you must sew on the right-arm side of the collar and false hem, exactly opposite the buttonholes. The corners of the buttonholes must be either both round or both braced. (See Lesson on Buttonholes.)
11. Sleeves, and Wristbands, and Gussets. - (a) Measure along the two open selvedges of the sleeves half the length of the wristband for the wrist opening of the sleeves, and mark by pins ; (b) fix the rest of the sleeve for sew-and-fell or run-and-fell, or a flannel seam, to match the side seams of the body ; $(c)$ then take the square sleeve gussets, and fix a double fold on one selvedge side, and a single fold on the other, and place the double fold to the single fold in the sleeve, and the single fold of the gusset to the double fold on the sleeve, so that the square gusset is set in diagonally, and fasten by pins ; ( $d$ ) tack the seam in the sleeve from the pins that indicate the wrist opening, along one side, including the gusset, then tack the other side of the gusset to the sleeve. Fix both sleeves in the same way. Flannel gussets must be set in by counter-fell fixing. (e) Fix narrow hems at the wrist openings; $(f)$ set in triangular gussets at the end of the seams in the same way as at the end of the body seams. (See Lesson on this kind of Gusset-making.)

> Note.-You will have learnt how to make three kinds of gussets in this style of shirt: (1) triangular with hexagon-shaped lining at the end of the seams, (2) double triangles in the neck gussets, (3) and square gussets, set in as triangles at the tops of the sleeves, to widen them. Sleeves widened by gussets are called old-fashioned, but they are very useful and economical, and strong for working-men and lads' dayshirts, as well as nightshirts.
(g) Fix the wristbands in the same way as the collar, and seam the ends, and stitch $\frac{1}{4}$ of an inch from all the edges, being careful to leave the bottom edges open to admit the sleeve, when it has been gathered; ( $h$ ) fold the wristbands into thirds down the depth, and mark by pins ; (i) place one-third of the wristband at each end on to the sleeve from either side of the wrist opening, then draw out the sleeve at its centre crease, and fold it into halves when it is double, and this will give you four divisions ; ( $j$ ) fold the middle third of the wristband into halves and quarters; $(k)$ gather the sleeve from the one-third of the
wristband to the other third, and set the gathers in on right and wrong sides, and fell the wristbands to the plain portion of the sleeves.
12. Setting the Sleeves into the Armholes. - (a) Place the point of the gussets to the side seam of the body, between the body and the binders, and tack the garment to the sleeve along both sides of the gussets,


Fict. 46.
which must never be gathered or pleated; (b) whatever of extra length of the sleeves is left beyond the length of the armholes must be gathered on either side of the centre crease, or folded edge of the sleeve, and set in at the shoulder-straps, where there will be double material, made of the shoulder-strap and body of the shirt; (c) the rest of the sleeve must be felled; ( $d$ ) set in the gathered portion of the sleeve on the wrong side of the binder, and
fell the rest of the binder to the plain parts of the sleeves.
13. Button and Buttonholes on the Wristbands.(a) When the sleeves are set into the armholes, lay the shirt out flat, with the front part of the body uppermost, and stretch out each sleeve ; (b) put a button on the upper part of each wristband, just above where the sleeve is put into the wristband ; (c) turn the shirt with the back part of the body uppermost, and stretch out each sleeve; ( $d$ ) cut a buttonhole the selvedge way of the wristband, so that it will be exactly opposite the button, and on the under part of each wristband.

Notes.-1. When you look at the front part of a shirt, with the sleeves stretched out, you will see the buttons, and when you look at the back part, you will see the buttonholes on the sleeves. 2. You will now have finished the shirt, and you must take out all the tacking threads, and press all the seams, and binders, and shoulder-straps, and fold a big pleat down the back of the body, and then fold in each side of the shirt on the back, with the sleeves stretehed out smoothly, then fold up the bottom part of the shirt, and turn back over this fold the front of the garment. 3. Fig. 46 gives the finished appearance of the shirt with neek gusset, and with shoulderstrap fixed and felled to the wrong side of the garment.

## THE GUSSET

## Remarks

1. Gussets are used (a) to strengthen the ends of slits and seams ; (b) to form sleeves, such as in infants' firstsized shirts ; $(c)$ or to add to the width of chemise and nightshirt sleeves.
2. Gussets that are used to strengthen the ends of seams in the sleeves and body of shirts are triangular in shape and have a lining. Gussets set into the armholes of infants' shirts are triangular in shape, but are not lined as a rule; and gussets set into chemise and shirt sleeves are
at first cut square, but form double triangles after being fixed to the sleeves.

Materials needed.-Two strips of calico to represent (when they are joined together) the garment, and a triangular piece of material for the gusset, sewing needle, tacking and sewing cotton, and scissors.

## The Lesson

1. Fixing the Garment.-(a) Seam.-You must find the selvedge of the two strips, and fix them for $1 \frac{1}{2}$ inches at one end either for sew-and-fell or run-and-fell seam, and seam and fell, or run and fell, and then flatten the seam. (b) Hems.-You must fix narrow hems on either side of the opening (which you can consider either the wrist opening of a sleeve, or the body opening at the end of the side seam), and you must bring these hems off to points at the top of the seam, and in order to do this successfully you will find it necessary to cut a small portion of the fell, so as to be able to turn this fold back to the wrong side. Neatly tack the hems.
2. Fixing the Gusset.-(a) Find the selvedge side of the triangle and turn down a narrow fold once, then turn

down a fold on the other short side, and then a fold on the longest side, which is on the cross, being careful not to stretch it ; (b) fold the gusset in half from No. 1 downwards, to find out if the fixing has been even, and to get the point of the triangle exactly in the centre ; (c) fold the point No. 1 down to the raw edge of the turning No. 4,
so that you now make a smaller triangle (marked 4, 5, 6 in Fig. 47) with a lining at the back of it; ( $d$ ) you must make this lining into a shape called a hexagon, so turn up corner 2 to 5 and corner 3 to 6 on the wrong side of the lining; (e) cut away corners 2 and 3, only leaving folds to match the depth of the other turnings (Fig. 47). These corners will be 7 and 8 now, and 2 and 3 will be at the bottom line.
3. Fixing and Sewing the Gusset into the Garment. -(a) Place No. 1 of the triangle to the end of the seam, and close to the seaming stitches on the right side, and tack the triangle from the point


Fig. 48. on either side of the opening to Nos. 5 and 6 (Fig. 47) ; (b) begin to seam at corner No. 5 , and seam as far as 6 ; (c) flatten the seaming stitches; ( $l$ ) fasten your sewing needle to the work; (e) turn the work with wrong side towards you, and place the crease in the middle of the hexagon to the middle of the seam, and with another needle and cotton tack it neatly, being careful to keep the sides quite even, and gently pulling the lines Nos. 2 and 3 of the hexagon to make it lie quite flat over the full and bulky part of the seam ; $(f)$ bring your needle with the sewing cotton in it to the wrong side at corner No. 6, by passing the needle between the garment and the gusset; $(g)$ fell the lining to the garment from No. 6 to No. 5, being careful to fasten all the corners securely ; $\left(h_{l}\right)$ when you have felled the lining, bring your needle through to the right side of the gusset at No. 5, and stitch across it near the edge, taking care not to stretch the gusset too much at this place, because the material is on the cross ; (i) fasten off neatly and
securely on the wrong side; ( $j$ ) press the lining with your fingers and thumbs to make it lie flat and smooth. Fig. 48 shows the gusset set into a shirt sleeve.

## CHAPTER V

## CUTTING OUT A WOMAN'S NIGHTGOWN

1. Front of Body.-(a) Take a piece of calico 57 inches long and 36 inches wide, and fold it in halves down its length; (b) fold the top part of the nightgown into halves again, so that it is 9 inches wide, then fold it into thirds; (c) the first third D to H is the width of the neck slope, fold this down on the garment to form a square, and draw a faint pencil mark from I , just below the square to H , for curve of neck; $(d)$ then fold in half the third at C to get the width of the armhole slope ; (e) measure down from C to J 2 inches for the shoulder slope, and crease this from J to $\mathrm{H} ;(f)$ measure down from $J$ to M 10 inches, and draw a line from $J$ to $M$ like the diagram, then cut out this curve, and slope the shoulders and cut out the neck curve, a little deeper than you have drawn it; $(g)$ cut the slit for the front to the right of the centre crease, so as to make the left-arm side wider, like you did for front of shirt. The slit is generally cut as long as the collar.
2. Back of Body.-(a) Take a piece of calico 54 inches long and 36 inches wide, and fold it in halves down its length; (b) measure down from A to F 10 inches, and measure in from A to $\mathrm{E} 1 \frac{1}{2}$ inches, or fold the folded garment into thirds, and then divide the third near the open edges into halves ; (c) draw a pencil line from E to F ; ( $d$ ) cut out this curve through the double material, and the back is cut out. You need not curve the sides of the front and back, like the diagram, but keep them quite straight.
3. The Yoke and its Lining.-(a) Take a piece of calico 20 inches long and 10 inches wide; (b) fold it in half, so that it is 20 inches long, i.e. selvedge way, and 5 inches wide ; (c) fold the yoke and its lining in half, so that it is 10 inches long, and fourfold ; $(d)$ fold it again


Fig. 49.
into halves, and then into quarters, and well press to get creases; (e) open it so that it is 10 inches long and 5 inches deep, and has three creases across the depth; $(f)$ from A to B is $2 \frac{1}{2}$ inches, i.e. one-fourth of the length, and from B to D is three-fourths of the length ; $(g)$ measure down 1 inch from $A$, and draw a curve from $C$ to $B$,
and then cut this out, through the fourfold material ; (h) measure from D to E 2 inches, and fold in a slanting line from $E$ to $B$, and cut off this slope through the fourfold material, and the yoke and its lining are cut out. (The yoke may be $18 \times 5$ inches.)
4. The Sleeves.-Take a 21 -inch square of material, and holding one selvedge side BD , fold it down till it is 7


Fig. 49-continued.
inches at the wrist ; then cut off the extra portions at the bottom, the top, and the side. Both sleeves must be cut out in this way.

Note.-All the rest of the garment is cut the selvedge way of the stuff, quite straight.
5. Cutting out a Saddie Yoke.-(Fig. 50) (a) Take two pieces of material, 24 inches selvedgewise, and 12 inches
deep, and fold it in halves, so that you have a 12 -inch fourfold square ; (b) fold this square into thirds down the depth of the stuff, and into fourths across the length ; (c)
 from $B$ to E is half the depth; measure in from B 1 inch, and fold in a slanting line from E to 11 inches, and then mark with broad blade of scissors a curve round to E, beginning with a straight line; (d) fold from E to F (which is nearly $\frac{1}{3}$ of the length) in a slanting line, and well press ; (e) then fold from F to G in a slanting line, i.e. as far as the first fourth crease ; $(f)$ then measure in from line AC at the centre crease IE $2 \frac{1}{2}$ inches, and


Fig. 51.
curve out from $G$ through $I$ to $H$ for the neck. From A to H is nearly half the depth of the material (Fig. 50). Cut the curves and slanting lines as true as possible.
N.B.-The nightgown body is not cut so long for a saddle yoke, and both back and front of the body is cut the same length. The front of the body is not sloped nor curved for the shoulder and neck, because the yoke forms these parts. The body is gathered both at the front and the back, and set in between the yoke and its lining.
Note.-Fig. 51 is a child's yoked nightgown.

Making up a Woman's Nightgown, with Tucked Front and. Yoked Back

Construction.-(a) The plainest style nightgown is made with shoulder-straps and neck gussets. Another style is with yoked back and tucked front, and buttoned in the centre of the front of the garment. A third style is made with the saddle yoke, and a fourth with yoked back and yoke fronts; the latter being separated from the back yoke in cutting out, and either put on quite plain or ornamented with tucks and rows of insertion. (b) The following description applies to the making up of the sectional diagram (Fig. 49).
(c) The Seams.--The sides of the garment may be straight or only slightly shaped. The seams can be joined by sew-and-fell, counter-hem, German hem, or run-and-fell, if the garment is made of calico or muslin ; if a flannel or flannelette garment, the seams can be fixed as for a flannel petticoat, and then run and backstitched, and herringboned on the wrong side.
(d) The Hem should be 1 inch wide when completed. Care must be taken to match the seams when fixing the hem ; a calico or muslin garment would be neatly hemmed; a flannel or flannelette garment could have a hem of one fold and be herring-boned, but it is preferable to turn the raw edge under, and backstitch on the right side.
(e) The Binders.-The front binder is always longer than the back one when the garment is made up with the tucked front and yoked back. The binders must be shaped to match the curves of the armholes, and must be joined
on the wrong side by run-and-backstitch, so as to fit the curve of body under the armholes. Turn down a fold of $\frac{1}{4}$ inch on the inner curves, and lay the wrong side of the binders to the wrong side of the armholes, and fell them neatly, being careful to fit the binders evenly at the top of the armhole, and to shape the front one to match the shoulder slope.
N.B.-Many people now dispense with binders altogether, and make the sleeves longer, and fix them to the armholes in such a way as to form a narrow border, or lining to the body. Binders are, however, necessary, because they strengthen the garment at the top of the side saams. They should not be very wide for this garment.
( $f$ ) The Yoke.-Crease the yoke down the middle at the back, and then crease the back body of the nightgown. Turn down a fold of $\frac{1}{4}$ inch, or more if necessary, along the straight selvedge side of the yoke. Pin the yoke to the body at the top of each armhole, then draw out the creased back body, and fold it towards the right armhole, in order to find out the exact place to begin gathering the fulness at the back of the body. By doing this the rule of gathering twice as much as the length of the yoke can be carried into effect. When the gathers are quite ready for setting in, fix the yoke most carefully and smoothly on the back body, being careful only to tack it at the armholes to the body, and not through the binders, and to place the centre crease of the yoke to the centre crease in the back of the garment, and to regulate the fulness properly. The yoke and body must be divided into halves and quarters for the gathers.
(g) The Lining of the Yoke must be fixed along the straight selvedge side, like the yoke, and then placed at either end on the binders and tacked to them only; the rest of the lining must be placed exactly on the gatheringthread, and set in as neatly, and with as much finish as the right side. The lining must not be taken above or below the gathering-thread and setting-in stitches of the yoke, or it will be puckered. It must also match the
yoke exactly at the slopes of the shoulders and at the armholes. When the gathers are completely set in, fix and tack the shoulder slopes and the armholes, to prevent the edges ravelling.
(h) The Front.-Some people tuck the front before sloping the shoulders or shaping the neck, others shape these parts before the tucking is commenced. In the diagram given, the tucks are fixed from the neck point of the shoulder, and the shaping is done first. The tucks may be made in sets of three or five, with a corresponding width of space between thèm. When both sides of the front are tucked, and match each other in width, then the centre crease of the front must be managed for the opening or vent. If a front fold is put on, on the rightarm side, and a hem is taken from the garment on the left-arm side, the garment must not be cut on the centre crease, but as much to the right of it as will allow material for the hem, so that the sides of the neck shall be equal in size, and still allow of the front fold lapping, and the centre of this fold to be the centre of the neck; or if the garment is cut down the centre crease, a false hem can be put on the left side of the opening to fold back on to the right side of the garment, and should be stitched, instead of felled to the garment.
(i) The Front Fold must be placed on the wrong side of the right-arm opening, and run and backstitched $\frac{1}{4}$ of an inch from the edge, then turned over to the right side of the garment, the other long selvedge side being turned down once, and the edge at the bottom treated in the same way as described in front fold of chemise. Tack the fold to the garment, being careful to allow it to form the outer edge of the slit, and fell it, and then stitch or feather-stitch it to the garment. The outer edge must be stitched or feather-stitched as well.
> N.S.-The correct way of fastening a nightgown is right orer left. The opening down the front should equal the length of the collar, but the front fold should extend quite an inch or an inch and a half below it. The fulness below the slit caused by
lapping may be pleated or gathered, and fastened down by the point of the fold. If a front fold of insertion is put on, a wider hem is fixed on the right-arm side of the slit, and the garment is cut as far as it is necessary to the left of the centre crease, in order to make both sides of the neck equal in width. The tucks must all fall towards the front fold, and they must be graduated in length towards the armholes. The front of the nightgown must be narrowed by the tucks, till each side is the same length as the shoulder slope of the yoke. The yoke must then be fixed to the front of the garment on either side of the opening, and the yoke must be neatly felled to the tucked portions, the tucks being kept quite flat and smooth. The edges of the shoulder slope of the yoke are sometimes stitched or feather-stitched after they are felled. The lining of the yoke must be carefully fixed over the shoulders of the garment, and must be neatly felled above the wrong side of the tucks and the stitches from the other side, and through the binders only. The lining of the yoke must lie perfectly smooth.
(j) The Sleeves.-(a) The sides of the sleeves must be joined by sew-and-fell seam, or any other method that has been used for the sides of the body ; (b) the fulness at the wrist may be pleated, gathered, or tucked, according to the material of which the garment is made. A portion of the material on either side of the seam must be left plain, and the remainder must be halved and quartered and then gathered, if stout calico ; tuckerl, if fine calico or Mull muslin ; and pleated, if flannel. The crosswise material is the under half of the sleeve.
(k) The Wistband.-(a) The wristbands are usually closed up at the sides by putting the two raw edges together, and joining them by run-and-backstitch, then flattening the seam, and turning it to the inside of the band, which is formed of double material ; (b) the raw edges must be folded under firmly and neatly; (c) the band must be divided into halves and quarters after placing the join to the seam of the sleeve and to the plain portions, on either side of the seam. The wristband is then neatly felled to the sleeve, and the gathers properly set in. The wristband is felled over the pleats and tucks,
and is usually ornamented with rows of feather-stitching, or, if an unbleached calico garment, it is stitched above the felling, and also at the outer edge.
> N.B.-Some prefer an open wristband with turned-down cuff. The band is then fastened by buttons and buttonholes.
(l) Fixing the Sleeves to the Armholes of the Borly.-(a) The seams of the sleeves must be placed between the body and the binders, and to the side seams, and tacked firmly and closely. If the sleeve is a little broader than the armhole, the fulness at the top must be gathered for a calico garment, and pleated for a flannel, and this fulness must be placed at the armhole portion of the yoke and carefully set in. The body armhole is thus fixed on the sleeve, and may be felled or stitched or feather-stitched. (b) The binders on the wrong side must be fixed to the stitches on the sleeve, and neatly felled. They must lie perfectly flat and smooth, and the felling must not be taken either above or below the stitches of the right side.
( $m$ ) The Collar:-(a) The neck portion of the garment needs skilful management. The neck slope in the sectional diagram is drawn higher than it must be when the garment is completed. It is always better to draw, and to cut out the neck slope in paper patterns higher than it must be, when the collar is fixed on, because the slope can always be cut deeper to correspond to the length of the collar, or the curves of the neck of the intended wearer, but if cut too deep at first, the collar must be made longer to remedy the evil, and the neck is out of proportion to the rest of the garment; (b) the selvedge sides of the collar must be fixed first, then the ends, which must be neatly seamed on the right side ; (c) the collar should then be divided into thirds, and about one-third fixed to the yoke portion of the neck, and a third to each side of the neck of the front; $(d)$ the collar should be fixed quite straight across the front fold and the left hem, and then carried round towards the shoulders; (e) the collar must be felled to the neck on the right side, and then carefully
felled on the wrong side, so that it lies quite flat and straight. The collar is ornamented by rows of stitching, or feather-stitching.
(n) Feather-stitching and Knotting.-The collar, wrist-


Frg. 52.
bands, front fold, and the spaces between the sets of tucks can be ornamented in a pattern formed of feather-stitch and knotting.
(o) Button and Buttonholes.-One button and buttonhole will be needed for the collar, and two buttons and button-
holes for the front. The buttonholes must be worked on the right-arm side, and the buttons must be sewn on the left. It is usual to cut the buttonholes the selvedge way of the material on the front fold as well as the collar. If the wristbands are open, two more buttons and buttonholes will be needed. If round corners are used, they must be placed at the end of the bands, and at the top of the holes on the front fold.

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\text { N.B.-Fig. } 52 \text { shows the made-up garment. }
$$

(p) Trimming.-The garment can be trimmed with a knitted edging, crochet edging, everlasting edging, or embroidery.

## Scale of Proportions for Nightgowns

The scale for nightgowns may be built upon propor tions agreeing either with the length of the collar, or with the height of the wearer, or upon both. The following scale is built partly upon the length of the collar, and partly upon the height of the wearer.

Length of the Nightgown may be either $\frac{6}{7}$ or $\frac{8}{9}$ of the wearer's height.

Breadth. - $\frac{2}{3}$ of the length, and more if gores are added.
Yoke.-(a) Length $=1 \frac{1}{8}$ or $1 \frac{1}{4}$ of the collar length.
(b) Depth $=\frac{1}{4}$ or $\frac{1}{3}$ of its own length.
(c) Length of shoulder slope $=$ nearly $\frac{1}{2}$ of the collar length; depth of slope at the armhole portion of yoke $=\frac{1}{8}$ of the collar length.
(d) Slope of neck in width $=\frac{1}{4}$ of the yoke length ; depth of neck slope $=1$ inch.
Sleeve.-(a) Length $=1 \frac{1}{3}$ of collar length.
(b) Width of the top is the same as the length.
(c) Width at the wrist $=\frac{2}{3}$ of the widest part.

Wristband.-(a) Length $=\frac{1}{2}$ the collar length $+1 \frac{1}{2}$ ins.
(b) Depth $=\frac{1}{2}$ its own length, before it is doubled.

Armholes.-(a) Length $=\frac{1}{2}$ the widest part of the sleeve.
(b) Slope $=\frac{1}{8}$ of the collar length.

Binders.-Length $=$ same as the armholes + the width of the binders for lining the body below the armholes.
Slope of Shoulder of Body.-(a) Length $=\frac{7}{8}$ of the collar length.
(b) Depth of slope of armholes $=\frac{1}{8}$ of collar length.
Neck Slope of Body.-(a) Width when the garment is folded in half $=\frac{1}{12}$ of the breadth of garment.
(b) Depth of slope $=$ a little more than the width.
Front Fold.-(a) Length $=$ same as the collar $+1 \frac{1}{2}$ inches.
(b) Width $=\frac{1}{8}$ of the collar length $+\frac{1}{2}$ an inch for turnings.
Front Slit is usually the length of the collar.
N.B.-In these proportions all turnings are allowed for.

## CHAPTER VI

EYELET-HOLES, CASING BONES, HOOKS AND EYES, BINDING SKIRT EDGES, OVERCASTING SEAMS, FEATHER-STITCH

## Eyelet-Holes

Method.-1. Making the Hole.-(a) Pierce the material with a steel or bone stiletto, on the right side of the article, till the hole is large enough for the hook, or tape string, or lace; (b) outline the holes on the right side by running stitches; (c) cut away a little of the material, which has been pushed to the wrong side.
2. The Stitches.-Overcast the eyelet-holes from left to right, working the stitches very close together, and drawing them tightly, in order to protect and cover the raw edges, and make them firm and strong.
> N.B.-Fasten on and off rery neatly and securely, on the wrong side, by a few backstitches.

Use.-Eyelet-holes are used instead of eyes, when dress bodices are fastened by hooks or laces, for laced boots and children's stay-bands, for neck hems of pinafores, frocks, shifts, which are drawn up by tape strings.

## Casing Bones

Method.-(a) Cut the whalebone the length of the bodice seams from the dart points, and under the arms, and middle of back to the edge of the bodice, before the false hem is added; (b) then cut pieces of lining like that used to line the skirt of the dress, in strips longer than the bones, and wide enough to allow of turnings, and to well cover the bones; (c) turn down one fold on the selvedges of the linings or casings, and on the width of them top and bottom, and lay the casings over the seams, on the wrong side, and then fell, or run them very neatly at the selvedges and bottom fold, to the dress material and its lining, just inside the overcast edges; $(d)$ see that the ends of the bones are well rounded and pared of all splintered pieces, and push them between the casings and the seams ; (e) then fell the tops of the folded casings very closely and neatly over the edge to the bodice.
N.B.-Casings of tape or silk binding can be purchased for this purpose, but those made from strips of skirt lining are more economical, and more durable.

## To set on Hooks and Eyes

Hooks and eyes should be thickly oversewn with flourishing or linen thread, or silk, the same colour as the
frock or dress, at the hook and eye portions, and should then be strongly fastened to the dress by closely oversewing the under part of the hook, and the ring portions of both hook and eye with strong thread or silk.

## To bind Skirt Edges

Skirt edges are bound with braid or velvet in the following manner:-place the braid $\frac{1}{6}$ or $\frac{1}{4}$ of an inch from the edge of the garment, with the right side of the binding facing the right side of the skirt, then run and backstitch the braid to the garment, a little distance from its own edge, and afterwards turn the braid to the wrong side, being careful not to draw it over the edge of the garment too tightly, and fell or run it neatly.

Note.--Braid binding can be placed equally over the edge of the skirt, and machine-stitched quite through the braid and the skirt, on the right side.

## Overcasting Seams

Seams can be overcast by blanket-stitch, or by seaming from left to right. (See Lessons on Print Patching.)

## Coral and Feather-stitch

Niethod.-1. Fastening on.-Slip the needle between the folds of the tucks, and bring it out on the right or upper side of the tuck, and make a backstitch or two, to secure the cotton, or wool, or silk, or flourishing thread.
2. The Stitch.-(a) Count two or more threads to the right of where the cotton is coming out, and put your needle under two or more threads diagonally, drawing the cotton towards you obliquely, and putting it under the point of the needle; (b) draw the needle and cotton out loosely, and always remember that wool especially must never be drawn tightly, oi the material will be
puckered, and after washing the stitches will be spoilt; (c) count to the left the same number of threads as you began with, and draw the cotton from the stitch you have just made in a slanting direction to the left, and put your left thumb on it, then throw the cotton to the left over


Fig. 53.
the thumb, and put the needle under two or more threads diagonally, and draw it out above the cotton, thus making a half knot, and a slanting stitch. This pattern is single feather-stitch, and is worked diagonally from right to left, and then from left to right. Fig. 53 gives several patterns of coral and feather-stitch. Coral-stitch is made by putting the needle in quite straight. The two first patterns are coral-stitch.

## CHAPTER VII

## SEWING ON TAPES ON VARIOUS ARTICLES

Sewing Tapes on Pillow-slips, Towels, Dusters, and Barrow-coats


1. Pillow-slips.-(a) Prepare the tapes in the same way as for bands; (b) place the tapes on the broad hem one-
fourth of the width of the pillow-slip apart, and just above the edge of the wide hem ; $(c)$ hem three sides, and stitch the tape across its width to the hem on the right side. The tapes must fall outwards from the slip, and the raw edges at the ends must be turned under by a narrow hem (Fig. 54).
2. Towels, Dusters, etc.-These must be hemmed on the wrong side, and stitched across their width on the right side, and the centre edges of the tape loop must be seamed together forwards and then backwards to form crosses (Fig. 55).
3. Pinafores.-Tapes are placed on the wrong side of the right-arm back, in the same way as on a band, and close to the edge, but on the left-arm back they are placed at a little distance from the edge, and are stitched to the right side of the pinafore. The ends must always be finished off by narrow hems.
4. Barrow-coats.-Tapes are placed at equal distances from each other at the sides of the garment, those on the wrong side being hemmed and seamed at the edge (or stitched), and those at the right side being placed from 4 to 5 inches from the edge, and the square of tape must be stitched to the garment. The ends of the tapes must be neatly finished off by narrow hems. Some people cover the square of tape on the right side of the garment with a square of flannel. The flannel squares are really herringboned to the garment.

## PART II

## KNitting And MENDING COURSE

## CHAPTER I

## SCALES FOR A MAN'S PAIR OF SOCKS AND A GIRL'S PAIR OF STOCKINGS ; A KNITTED EDGING, AND TAKING UP A LADDER

Scale for Man's Socks

1. Number of stitches on each needle . . . 32
2. Total, including seam stitch . . . . 96
3. Rib or welt . . . . . . . . 3 inches
4. Plain or ribbed rows . . . . . . 3 ,
N.B.-Longer if necessary.
5. Leg reductions, i.c. double decreasings $\cdot\left\{\begin{array}{c}4, \begin{array}{c}\text { with } 6 \text { rows } \\ \text { between }\end{array}\end{array}\right.$
6. Total of stitches for ankle . . . . . 88
7. Plain or ribbed rows to the heel . . . . 3 inches
8. Number of stitches on the heel needle . . 43
9. Size of the heel $\cdot\left\{\begin{array}{c}\text { The same number of rows as stitches on } \\ \text { the needle }\end{array}\right.$
10. Number of stitches after the heel is turned. Dutch. 11
11. Number of slip stitches on each side of the heel . 21
12. Number of stitches after gusset decreasings, with one row between 88
13. Length of foot from the first gusset decreasing of the heel to the first toe decreasing

The same as the length of the ankle, plus the length of the leg reductions in the calf.14. Reduce the toe till the number of stitches left on thetwo needles are14

Note.-See author's T'ext-book for other sizes.

Scale for Girl's Stockinges ( 16 to 17 years)

> Materials.-4-ply Fingering, or Winter Merino, or Angola Wool Needles.-Nos. 14, 15, or 16, according to the knitter

1. Number of stitches on each needle ..... 32
2. Total number of stitches, including the seam stitch ..... 96
3. The rib or welt ..... 3 inches
4. Plain rows, or two squares ..... 96
N.B.--Longer if necessary.
5. Number of double narrowings ..... 13
6. Total number of stitches, after the decreasings ..... 70
$\left.\begin{array}{l}\text { 7. Number of rows to } \\ \text { the heel }\end{array}\right\}$ One square or more, if necessary.
7. Number of stitches on one needle for the heel ..... 35
8. Number of stitches on the instep needles ..... 35
9. Size of the heel The same number of rows as stitches on11. Number of stitches after the heel is turned. Dutch9
10. Number of slip stitches on each side of the heel ..... 17
11. Number of stitches after decreasings, with one row between ..... 70
12. Length of foot from first gusset decreas- ing of the heel to the first decreasing doubled.
13. Number of stitches on each of the two needles for the toe
N.B.-The seam stitch is decreased after the turning of the heel.35
14. Number of stitches to be cast off each of the two toe needles ..... 11
N.B.-The scale is for coarse materials, See author's Text-book for other sizes.

## Knitted Edging

Materials. - Wool, crochet cotton, or linen thread.
Method.-1. Cast on five stitches, and knit them off.
2. First Row.-Slip one, bring the cotton forward and knit two together twice.
3. Second Row.-Slip one, and knit plain to the end of the row.
N.B.-Repeat the second row, after every pattern row.
4. Third Row.-Slip one, bring the cotton forward and knit two together twice, cotton forward and knit one.
5. Fifth Row.-Slip one, cotton forward and knit two together twice, cotton forward and knit two.
6. Seventh Row.-Slip one, cotton forward and knit two together three times, cotton forward and knit one.
7. Ninth Row.-Slip one, cotton forward and knit two together three times, cotton forward and knit two.
8. Eleventh Row.-Slip one, cotton forward and knit two together four times, cotton forward and knit one.
9. Thirteenth Row.-Slip one, cotton forward and knit two together four times, cotton forward and knit two.
10. Fifteenth Row.-Cast off eight stitches, then bring cotton forward and knit two together, cotton forward and knit one.
11. Sixteenth Row.-Slip first stitch and knit four plain.

Repeat from the first row till enough has been knitted for trimming a garment, or a couvrette, or counterpane, or any other articles.

Use.-This edging, knitted in No. 20, or finer, Evans's cotton, makes a very strong trimming for children's underclothing, e.g. drawers, flannelette nightgowns; but if in linen thread it makes a pretty trimming for frocks and pinafores.

## Taking up a Ladder, or Dropped Stitches in Knitting

Method.-(a) Put your hand into the stocking and hold the ladder or dropped stitches over the forefinger of your left hand, with the loops towards you; (b) take the head of a pin or crochet-hook, and put it away from you under the loops to the right, and then under the ladder of cotton or wool and quite through it, without splitting or breaking the ladder or the dropped loop; (c) draw the ladder through the loop, and go on taking up the other dropped stitches in the same way.

## CHAPTER II

## Darning

## Darning a Thin Place on Flannel or other Woollen

 Material.-(a) Turn the wrong side of the garment towards you, and place the selvedge way of the material up and down over the back of two fingers of your left hand ; (b) begin at the left-hand side, either at the top or the bottom, and put your needle under one or more of the strong threads away from the thin place at the top and the side, and then over one or more threads, and repeat the process of under and over the threads, till you have well covered the length of the thin place, and made a border on all sides of it ; (c) come down one or two threads (or go up) to make irregular

Fig. 56.
edges, leave loops at the end of each row to allow of working up into the material, and thus preventing a pucker, and to allow of shrinking in the wash; (d) leave one or more threads between each row to prevent a cobble. The shapes of darns depend upon the shapes


Fig. 5\%.
of the worn parts. Sometimes an oblong is the best shape, and sometimes a diamond. Figs. 56 and 57 give you the shapes of darns not only on woollen materials, but also on table and house linen.

Darning in a Patch on Woollen Dress Materials Method.-(a) Cut away all the worn and torn part of
the garment to a thread on all sides of the hole ; (b) cut a patch of the same material, large enough to fit the hole, without overlapping it, and matching the pattern, if the material has one; (c) tack the edges of the patch to the edges of the garment in zigzag from side to side ; $(d)$ turn to the wrong side and darn as for a thin place and hedge tear $\frac{1}{4}$ of an inch on the patch and the garment, taking care to draw the edges closely together, without puckering; (e) lay a damp cloth on the patch and garment, and well press with a hot iron.
N.B.-This is an excellent way of patching thick woollen dress materials such as Scotch tweeds, which do not ravel ont very quickly, and are too thick to bear turnings. The darning material must match the dress material if possible, in a lighter shade of colour, and must be strong. Silk is often the best material to use.

## Twill and Wave Darins

Method.-Twill.-Put the needle under and over the threads, as in ordinary darning, and keep to the same number that was taken up in the first row, but always coming down one lower in every row.

> N.B.-This darn is very useful for twilled materials, e.g. flannel, serge, and other dress materials, and twilled calicoes and linen.

The Wave.-This darn resembles the twill. Put the needle under and over the threads or loops of the material, and come down one in every row, till say five, or seven rows are darned, then go up one in every row, till seven rows are darned, and then in the next seven rows come down one loop or thread.

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## CHAPTER III

## CROSS-CUT AND HEDGE-TEAR DARNS

## Remarks

1. A cross or diagonal cut is generally caused by accidentally cutting the material with a sharp instrument, as in carelessly cutting bread on the tablecloth, or by the knife slipping against the pinafore while sharpening a pencil.
2. In a cross cut both the selvedge and woof threads are damaged, and for this reason the hole must be darned in a particular way, to prevent the slit from gaping when the articles are in use again and are stretched.
3. You must learn and practise this darn on a square of linen before you try to darn a tablecloth or a garment. You must not think you are wasting your time in learning to darn cross or diagonal cuts, because you may some day have the oversight and care of the linen of a household.

Materials needed.-A linen tablecloth, or table napkin, etc., linen thread, darning needle, sewing needle and cotton, pencils, scissors or penknife, inch measure.

## LESSON A

## Drawing the Rhomboids

1. Cutting the Material.-(a) Find the selvedges of the material ; $(b)$ fold the square diagonally from corner to corner, and crease carefully ; (c) open the square and measure along this diagonal crease $\frac{1}{2}$ inch, and cut this $\frac{1}{2}$ inch with a sharp penknife or scissors, either from the right-hand top corner towards the left bottom corner (as in Fig. 58), or from left top corner to right bottom one.
2. Drawing the First Rhomboid.-(a) Begin on the selvedge side ; if the cut is a true diagonal, leave a space on either side of it half its own length, so as to form a square, and indicate the square by faint pencilled lines. (Corners 3, 4, 5, and 6 in the diagram, Fig. 58, represent


Fig. 5S.
the square.) If the cut is $\frac{1}{2}$ inch, the sides of the square must be 1 inch. (b) Extend the lines of the square at its opposite corners 3 and 4, upwards and downwards, the same length as its sides, i.e. 1 inch (Fig. 58).

Notes.-1. If the slit is going in the opposite direction to that in the diagram, you must extend the square upwards and downwards at corners 5 and 6 , in order that the slanting lines of the rhomboid may go in the same direction as the slit. 2. You enclose the slit within rhomboids, so that you may darn a
great deal of the material on the cross, and thus prevent the hole from gaping when pulled diagonally. If you only darn the square, you will not sufficiently protect the sides of the slit.
3. Drawing the Second Rhomboid.-Turn your work round, and extend the line of the square at corner 3 upwards, and at corner 4 downwards, thus making corners 9 and 10 (Fig. 58).

Notes.-1. You can crease the lines of the rhomboids, instead of drawing pencilled lines. 2. A good definition of the word rhomboid is an oblong pulled out of shape. 3. Two rhomboids crossing each other give the appearance of triangles.

## LESSON B

## The Darning

1. Fishbone Stitch. -Hold the wrong side of the material towards you, and draw the edges of the cut together by passing a sewing needle and cotton under and over the edges alternately, so that the stitches interlace, and the edges nearly touch each other. This stitch is called the fishbone, and it is used to prevent the edges from fraying out while you are darning. You must not withdraw the sewing cotton when the darn is completed, because it shows that you cut the slit before you did the darning (Fig. 59).
2. Darning.-(a) Keep the wrong side towards you, and begin darning the rhomboid that is drawn the selvedge way of the stuff, either at the left-hand top or bottom corner; (b) darn from No. 5 to No. 8 by putting your needle under one and over one thread, if the material is coarse (or under and over two threads, if the material is fine), draw the needle out and leave an end ; ( $c$ ) leave one or two threads between every row, according to the number of threads you have gone under and over in the first and all succeeding rows of the darning; $(d)$ be careful to keep the bases of the triangle even on the right side, and
in order to do this you must sometimes take up less and sometimes more threads at the slanting lines than on the rest of the material ; (e) leave loops of even length at the end of every row, and remember why you must do so (to allow the thread to work up into the original material, and for shrinking in the wash) ; $(f)$ when you reach the


Fig. 59.
slit be very careful to put your needle under the edges, so as to keep all the frayed parts to the wrong side, and work under and over the fishbone stitches, as you would do in the common darn, and disregard the rule of under one thread and over, if it is likely to prevent you from properly strengthening the slit; $(g)$ when you have darned the first rhomboid, turn your work round, and darn the second in the same way, being careful to put your needle
quite through the stuff, as well as the thread, when crossing the square, in order to fix the slit firmly, and to darn in all the jagged edges of the cut.

Note.-You must remember that the square is double darned, both on wrong and right sides, but the angles are only darned once (Fig. 59).

## THREE-CORNERED OR HEDGE TEAR

## Remariss

1. This kind of tear more frequently happens to a dress or an apron, than to any other article of clothing, by being accidentally caught on the pointed edge of a desk or a nail. Table and bed-linen and underclothing are sometimes accidentally torn in this way, in the drying ground, after being washed. In rural districts it is called a hedge tear or a snag.
2. In this kind of tear the threads are severed both ways of the stuff separately, except at one corner, where the selvedge and woof threads are torn away together.
3. The shape of this darn varies. If the sides of the tear are equal in length, a square is suitable ; but the sides are oftenest unequal, and for this reason oblongs are best.
4. If the tear is on a serge or other woollen material, you must use Shetland or Andalusian wool as nearly as possible of the same colour ; but if on cashmere, merino, alpaca, llama, or silk, you must use silk of the same colour, and afterwards press the darn with a warm iron.

Materials needed.-A serge, or flannel, or alpaca dress or apron, a darning and a sewing needle, darning material, sewing cotton, scissors or penkuife.

## Drawing

1. Drawing the First Oblong, Selvedge Way.-(a) Find the selvedge, and mark by a pin ; (b) measure away
from corner $l$, where all the threads are severed, either $\frac{3}{8}$ or $\frac{1}{2}$ inch; and then the same distance to the right of corner $c$, and the same upwards and downwards ; (c) mark these distances by pencilled dots, and connect them by straight lines, thus forming the first oblong ( $1,2,3,4$ in Fig. 60).
2. The Second Oblong.Turn your work round, and extend the line 1,2 to your left the same distance as that between 1 and 2 , and upwards from corner 6 the same


Fig. 60. distance as from 1 and 2, and draw faint pencilled lines to form the second oblong, which crosses the first one.
3. The Fishbone Stitch.-Draw the edges of the cut together by the fishbone stitch (see Lesson on the Cross Cut).
4. The Darning.-(a) Begin to darn at corner No. 1,


Fig. 61. and work down and up, under one, over one, till corners 3 and 4 are reached, when the first or selvedge oblong will be completed (see Lesson on Cross Cut, because the method of darning is the same); (b) turn the work round and begin at corner 5 , and darn down and up till the second oblong is completed.

Notes.-1. Yon must be careful to leave a thread or threads between the rows and loops, and to work throngh the material, when crossing the first oblong from 1 to 8 , and 2 to 7 , and to keep all the raw edges to the wrong side. 2. You must observe that the corner which has been most damaged and
weakened is strengthened by the double darn; the other two corners are only darned once. 3. The cotton of the fishbone stiteh is a great help in darning that part of the tear where all the threads are severed. 4. The patterus formed by the crossing of the first figure, in both the cross-eut and hedgetear darns, vary ; sometimes being in the form of X's, T's, or V's.

## CHAPTER IV

## DARNING THIN PLACES AND HOLES IN SOCKS AND STOCKINGS

Materials needed.-Perfectly clean socks or stockings, darning or mending angola, or merino, or cotton, or silk, according to the texture of the socks and stockings, darning needle, sewing needle and cotton, scissors, crochet-hook.

1. Darning a Thin Place.-(a) Turn the sock or stocking with its wrong side towards you, and put your left hand in it and under the thin place, arranging the part to be darned so that the ridges go round the hand and lie flat upon it; (b) begin at the left-hand side upon the strong loops above and away from the worn ones ; $(c)$ notice that the loops in stocking material go down and up in vertical rows, as well as in ridges, horizontally ; (d) begin either at the top or bottom (if at the top you must darn over and under the down loops, but if at the bottom, over and under the up ones), and when you have well covered the length of the thin part, draw your needle out, without puckering, and leave a short end ; (e) come down (or go up) one ridge in the second row, and put your needle under and over the up (or clown) loops, stopping one ridge from where you fastened on, and draw your needle out, leaving a loop at the bottom; $(f)$ keep your work in the same position all the time you are darning, and be careful to darn every row, or you will pull the loops out of shape, and (because the stocking web is elastic)
the thin place will not be strengthened perfectly unless all the loops are covered alternately on the wrong and right sides (Fig. 62).
2. Darning Holes. - (a) Turn the wrong side of the sock or stocking towards you, and if it is a coarse knitted


Fig. 62.
one, and the hole has very torn edges, cut away the fractured parts ; (b) then draw out the broken bits and ladders till the loops at the top and bottom are free and quite sound. (If any of the ladders are unbroken, take them up as described below.) (c) Draw the ends out at
each vertical side, and crochet them under and over the up and down loops of the ridges to fasten them down neatly and securely, or pass your needle under and over the loops, then thread the eye of the needle and draw the end into the sock, as far as its length will allow. If the material is very coarse, you will need a large-eyed needle. (d) When all the ends at the sides are fastened in, begin to darn as for a thin place at the left-hand side of the hole, remembering all the chief points of stocking-web darning : e.g. (1) under and over the down loops, if you begin at the top, or under and over the up loops, if you begin at the bottom; (2) to come down a ridge in the second row, in order to make the top and bottom edges of the darn irregular; (3) to darn every row, so as to protect all the loops alternately on the wrong and right sides; (4) to leave loops at the end of every row to allow of working up into the material when it is worn again, and for shrinking in the wash. (e) When you reach the vertical side of the hole, you must be careful to put your needle through all the loops to make a strong and even edge; $(f)$ you can now cut away any of the broken ends lying on the surface of the darn at the left-hand side of the hole ; (g) darn the thin place above, below, and on all sides of the hole, the same size as the hole itself ; ( $h$ ) put your needle quite through the detached loop, either at the top horizontal edge or the bottom, and fit it into its proper space opposite ; for instance, an up loop must be fitted by means of a long strand of the darning wool, into the space between two down loops, and a down loop must be fitted into the space between two up ones; (i) do not pull the long vertical strands of the mending material too tightly, nor leave them too loose, and be most careful to see that you have put your needle quite through the loops without splitting them. Sometimes it is necessary to put your darning needle under the loop above or below as well as through the one which is detached, in order to keep the pattern of the darn the same all over the surface. ( $j$ ) Go on dove-tailing or fitting in the detached loops, and darn-
ing below and above the hole, till the right-hand vertical edge is reached, when you must repeat what you did at the left-hand side, and darn as much to the right of the hole as you did to the left of it. Finish with an up row, and cut the wool (Fig. 63).

Wrong Side


Fig. 63.
3. Crossing the Hole.-(a) Turn the sock round, so that the loops of the mending material are at your left and right hand ; (b) begin a few rows away from the hole, unless the darn requires to be re-covered on all sides of the hole, then begin just inside the loops at the left-hand side and darn under and over the strands of the mending material, between the ridges (and quite through the
stocking, if it is very thin), and leave loops at the end of every row till the hole is reached; (c) put your needle under and over the loops that are stranded, without twisting them. This is the most difficult part of the darn, but with care and patience you will overcome the difficulties, and produce good and strong work. (d) Put your needle under and over the strands which dovetail the loops


Fig. 64.
alternately in every row of the web, while crossing the darn, so as to fill the hole as closely as possible without puckering or bungling (Fig. 64).

Notes.-1. Some people prefer to dovetail the detached loops at the top and bottom of the hole, with a needle and sewing cotton, to prevent the loops from slipping down during the process of darning. The sewing cotton is afterwards cut and drawn out. 2. If you are darning a cotton sock or stocking you must use mending cotton of the same colour, and if ladies' and gentlemen's silk stockings and socks, you must use mending silk as near as possible the same shade of colour. 3. If the socks and stockings are fine, you must, after freeing the loops of broken bits, endeavour to dovetail the detached


#### Abstract

loops at first with the mending material, and then darn as for a thin place, and dovetail the loops a second time. If the hole is only a small one, it will not need any crossing. 4. The loops at the sides of the darn must all be kept the same length. 5 . The shape of the darn must correspond with the shape of the thin place or the hole. 6. The mending material must be a little finer than the texture of the garment to be mended. 7. Darn is an old British word that means to hide or darken. 8. The above method of darning a hole is called the "common," because it is practised in nearly all civilised countries. For other methods of darning, see author's Text-book.


## CHAPTER V

## PATCHING FLANNEL, SERGE, AND CLOTH MATERIALS, HERRINGBONE STITCH AND CORNERS

Materials needed.-A flannel petticoat, or pair of drawers, or man's vest, needle and sewing and tacking cotton, sewing silk, scissors, pins (hot iron, when the darn is finished).

1. Patching a Flannel Petticoat.-(a) We will suppose a hole has been worn in the petticoat close to the centre of the band, or that this part of the garment has been worn too thin for darning, so unpick the band over the worn or torn part, both on the right and wrong sides, and some little distance away on either side of the damaged material, in order to free the petticoat, and give you more scope to work skilfully and neatly ; (b) take a large piece of flannel of the same colour as the garment you are mending, and, if possible, about the same age, only strong and sound, and place it over the damaged surface in such a way that you are quite sure it will cover the hole and some distance beyond it on all sides (the patch must always be 1 or 2 inches larger than the part to be patched) ; (c) turn the wrong side of the garment towards you, with the selvedge going up and down in front of
you; (d) find the right side of the patch, and pass your hand gently over it to see if the nup is falling downwards, and put in a pin, as you did when making up a petticoat; (e) place the right side of the patch with nap falling in


Fig. 65.-Outer Corner.
the right direction well over the worn or torn part, with the top edge close to the top edge of the petticoat, the


Fig. 66.-Inner Corner.
selvedges matching; $(f)$ press your hand upon the patch to keep it flat and smooth, and then hold the garment and patch up to the light to see if the patch covers the part evenly on all sides, and if the hole is in the centre of the patch; (g) tack the patch five or six threads from the
edges, beginning on a selvedge side first; ( $k$ ) herringbone the patch to the garment, beginning at the left-hand selvedge at the top of the petticoat, four threads above the raw edge, and finish off at the top of the other selvedge side, so that you only herringbone three sides of the patch to the garment, because the top part will be placed between the edges of the band. (Fig. 65 shows the herringbone stitch and outer or patch corner.) (i) Turn the right side of the petticoat towards you, and you will see the right side of the patch showing through the hole, and cut in a slanting line to the two corners of the patch by putting your scissors under the torn garment at the waist part first, and holding it up to the light to enable you to cut to within eight threads of the tacking cotton, showing through from the wrong side; ( $j$ ) then cut in a straight line from the waist to the right-hand corner in a vertical line, then across from the right-hand to the left-hand corner, and lastly, from the left-hand corner to the waist again, thus


Fig. 67. cutting away the torn and worn portion of the petticoat, and allowing the patch to take its place; (k) begin to herringbone four threads from the raw edge, at the lefthand side, and at the top of the petticoat, and fasten the petticoat to the patch on three sides. (Fig. 66 shows the stitch and the inner or garment corner.) Take out the tacking cotton and well press the patch to make it lie flat and smooth. Be sure the herringbone stitch shows through on all sides of the garment and the patch. Now place the top part of the patch with its centre crease under the centre of the band, and tack the band in a
proper line over the patch, and very neatly fell, being very careful at the fastening on and off to work over a few of the felling stitches already worked on the band; $(m)$ turn to the wrong side and fell the band, as before. Only three joined sides can be seen. Fig. 67 shows the mended petticoat. If the petticoat is worn out at the knee portion,


Fig. 68.
four sides of the patch must be herring-boned to the garment, etc., as in illustrations (Figs. 68 and 69). If there were pleats in the petticoat before being patched, you must replace them.
2. Patching a Pair of Flannel Drawers at the Knee. -(a) Unpick the leg-band away from both sides of the worn part and take out the pleats, and damp and press the flannel with a warm iron to smooth it, or put a heavy
weight on it ; (b) find a piece of flannel large enough and strong enough to form the patch; (c) turn the wrong side of the garment towards you, and place the selvedges up and down in front of you; (d) place the right side of the patch, with nap falling down, well over the hole on the wrong side of the garment.


Fig. 69.
N.B.-The nap will fall towards the leg-band.
(e) tack the patch to the garment, as described in the first lesson, and herringbone three sides; $(f)$ turn the right side of the garment towards you, and proceed as you did with the petticoat. When the worn and torn part of the leg is cut away, press the garment down on the patch, and herringbone three sides; (g) pleat the patch to match
the length of the leg-band, and then place it between the bands, and fell the right side of the band first, or stitch it, if it were stitched at first, and then fell the wrong side of the band. Fig. $70(c)$ shows one half of the patch and one corner, when finished, on the right side.
3. Patching Serge.-(Fig. 70, b) These knickerbockers are open at the sides. (a) Unpick the back seam and a portion of the leg seam, and press the serge well ; (b) find a suitable piece of serge to form the patch, and shape it to the pattern of the garment at the back seam and the leg seam, being careful to match the selvedges, and the nap, and twill pattern of the serge, and at the same time carrying the patch well over the worn and torn part to the right of the back seam. This shaping and placing must be carefully and skilfully done. (c) Turn the wrong side of the garment towards you, and place the right side of the patch on the wrong side of the garment, matching the selvedges and the nap, and put in a few pins; ( $($ ) turn the right side towards you, and cut away the worn and torn part of the garment to within $\frac{1}{2}$ inch of the stronger part; (e) at the corner near $b$ cut diagonally for $\frac{1}{4}$ of an inch, and cut the corner of the patch for $\frac{1}{4}$ of an inch diagonally, in order to fit it in accurately; ( $f$ ) now place the raw edges of the patch to the raw edges of the garment, beginning at the leg seam, and put in pins, being careful to ease the patch a little, and yet not to fit it in too loosely, or it will sit badly; (g) tack the edges together $\frac{1}{2}$ an inch below the top, and take out the pins; (h) stitch strongly and carefully by the tacking threads, putting the stitches close together at the corner, and over-
cast the raw edges separately; (i) take out the tacking cotton, and tack back each edge, and then damp the seam with a clean wet sponge, or piece of flannel, and press well with a hot iron.
N.B.-The overcasting is more strong if the buttonhole stitch is employed.
(j) Refix the back and leg seams, cutting away any extra material of the patch, in order to make it fit properly. Fig. 70 (b) shows the patch on the wrong side.
4. Mending Cloth.-(Fig: 70, a) (a) Open the seams of the garment, as in above lesson; (b) match the cloth in selvedge, right side, and colour ; (c) cut a square of cloth diagonally, and fit it over the worn part on the right side of the drawers, then cut away the worn part diagonally.
N.B.-The diagonal patch must be larger than the worn part.
(d) Turn the wrong side of the garment towards you, and fit in the patch, matching the selvedge and the wrong side, then tack from $\frac{1}{4}$ to $\frac{3}{8}$ of an inch from the raw edges, and stitch with very strong thread; (e) put an ironing board into the garment, and lay the mended part flat upon it, damp the seam, and then press well with a hot iron. Fig. $70(a)$ shows the seam on the wrong side. ( $f$ ) Refix the leg and back seams, and fasten them together again.

## CHAPTER VI

## PATCHING CALICO

1. Patching a Chemise.-(Fig. 71) We will suppose a calico chemise has been worn out in the front of the body by the friction of kneeling at your work. (a) Find a piece of calico that is quite clean, and as like the texture of the stronger part of the garment as you can get. (If you are compelled to use new material in any kind of flannel,
calico, or print patching, you must wash the piece intended for the patch before you begin the mending, in order to soften it.) (b) Take the garment and fold the worn part in halves down the length, and then across the width to form creases ; and do the same with the patch, which you have cut larger than the hole to be mended; (c) turn down a fold on each selvedge of the patch $\frac{1}{4}$ of an inch deep,


Fig. 11.
and do the same across the width, and well crease the folded edges; (d) turn the wrong side of the garment towards you, and place the patch with the folds downwards upon the garment, making all the creases match, and the hole lie under the centre of the patch; (e) tack close to the edges of the patch, and then neatly fell (or fell the wrong side, after all the fixing is completed) ; $(f)$ turn the right side of the garment towards you, and cut away all the worn and torn part of the garment to a little more than

1 inch from the felling stitches; (g) the sides must be cut quite straight, and the garment portion surrounding the felling stitches must be the same in depth on all the sides; ( $h$ ) cut up to the corners of the garment diagonally for $\frac{1}{4}$ of an inch, and turn folds of this depth along the selvedges first, and then across the width, being careful to turn all the raw edges under at the corners; (i) tack the garment to the patch, and then press up the edges of the patch to the edges of the garment, and begin to seam in the middle of a selvedge side, and put in a few extra stitches at the corners for strength; $(j)$ take out the tackings and flatten the seams, and press the fells.

Notes.--1. Hold the patch towards you while seaming, in order to prevent any puckering or any looseness. 2. There are several other methods of fixing a calico patch, e.g. (a) by counter-fell. This method is useful when the garment has been worn a long time, and is also the best method of fixing a patch on old sheets and tablecloths. (b) By fixing a double fold on all sides of the patch, and cutting away all the worn and torn part of the garment, cutting up each corner diagonally, and fixing one fold on all the sides, and then fixing in the patch on the right side of the garment, and seaming on the right side and felling on the wrong. This fixing is by sew-and-fell seam. The patch must be cut with the utmost nicety and accuracy to fit well into the gap made in the garment, and the fells must not be caught in at the corners. (c) Another method is to fix a wide fold on all sides of the patch, beginning with the selvedges, and then raising squares at the comers (these squares when held diagonally resemble a bishop's mitre), then fix the patch well over the hole on the right side, and tack and seam the patch to the garment, being careful not to seam in any portion of the mitres at the corners. Turn the wrong side of the garment towards you, and cut away all the worn part of the garment, as far as $\frac{1}{4}$ or $\frac{1}{8}$ of an inch, and pull the corners diagonally to stretch them, then pull ont the mitres, and the fell of the patch will come with them, and form a border outside the seaming stitches. Turn under a fold, and fell the patch to the garment. The effect of this method of fixing is still by sew-and-fell seam. It is an excellent method for fine calico, and varieties of cotton goods, e.g. as nainsook and mull muslin.
2. Patching a Shirt under the Arm.-We will suppose the shirt is made of Oxford shirting or calico, and that the garment has been torn away from the sleeve and the binder under the arm by the constant movements of the arm in some manual labour. (a) Unpick the sleeves, and the binders from the sleeves, and the side seam of the shirt; (b) get a piece of the same kind of material as the shirt, and large enough to cover the damaged part well, and to allow of shaping to match the curves at the armholes and sides, and for turnings at these parts. (If the armholes and sides are quite straight, only allow for turnings at these places.) (c) This kind of patch is better fixed by counter-fell, so turn down a $\frac{1}{4}$-inch fold on the one selvedge, and then the two woof sides, and press the edges firmly ; ( $l$ ) place the patch well over the worn part, and on the stronger material, and tack, and then fell neatly and strongly at the two corners ; (e) turn to the wrong side, and cut away all the worn and torn part for $\frac{1}{2}$ or $\frac{3}{4}$ of an inch from the felling stitches showing through ; $(f)$ cut up at each corner $\frac{1}{4}$ of an inch, and turn a fold under down the selvedge side, and then across the woof, and tack the fell evenly to a thread; (g) fell neatly, and take out all the tackings ; ( $h$ ) fix the side seam, being careful to press the fells on the garment quite flat to make them sit well at the side seam; (i) then fell the binder to the shirt, and replace the sleeve by fixing it between the binder and the shirt, pressing the fells on the garment as flat as possible to prevent a clumsy cobble, and then set in the sleeve as described in making up this garment. Fig. 46 shows the patch on the right side.
3. Patching the Leg of Calico Drawers.-(a) Unpick more than half of the leg-band and the leg seam ; (b) get a piece of calico large enough to form half of the width of the leg, with allowance for shaping at the leg seam and turnings ; $(c)$ turn down a fold from $\frac{1}{2}$ an inch on the selvedge of the patch to be placed at the side of the leg in a line with the hip opening, and then at the top slanting line across the width of the patch, and mitre the corners ;
(d) lay the patch on the right side of the garment, with the straight selvedge side a little beyond the crease of the half leg, and in a perfectly straight line with the selvedge of the garment, and tack it close to the edge, along this and the slanting side; (e) seam the two edges, then take out the tackings, and flatten the seams; $(f)$ turn to the wrong side and cut away the worn part, as described in


Fig. 72.
Method (C) ; pull out the mitres, and fix the patch, and fell to the garment; $(g)$ then see that the patch fits the curve of the leg, and fix it to match the rest of the leg seam, and put in the stitches. Take out the tacking threads, and well press the sew-and-fell seams of the patch, and the $\operatorname{leg}$; ( $h$. re-gather or pleat the leg into the kneebands, and you will have finished the mending. Fig. 72 shows the patch on the right side.

## CHAPTER VII

## PATCHING A PRINT GARMENT

Materials needed.-A torn print pinafore, or apron, or

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Fig. 73.
gown, a piece of the same pattern, scissors, pins, tacking and sewing cotton.

Method.-(a) Wash the print that you have found will be large enough to cover the hole, and match the pattern, to make the colours less vivid and more like the torn gar-
ment, which probably has been washed many times before it was worn into a hole, or accidentally torn ; (b) the garment must be unstarched when it is being repaired; (c) keep the right side of the garment towards you, and again match the pattern on the patch with that on the garment; ( $l$ ) fix folds on the selvedges first, and then on the woof


Wrong Side
Fig. 74.


Fig. 75.


Wrong Side
Fic. 76.
sides, and while fixing the patch be careful to match the pattern ; (e) tack the patch to the garment, still being watchful not to displace the pattern ; $(f)$ seam the patch to the garment, beginning on a selvedge side first; (g) take out the tacking cotton and press the seams ; ( $h$ ) turn to the wrong side and cut away the worn part, even to a thread, to the same depth as the turnings on the patch; (i) then overcast the
edges together, either by buttonhole stitch, or long seaming stitches, from left to right. Figs. 73, 74, and 75 show the right and wrong sides, and two methods of overcasting. Fig. 76 gives another method of fixing and overcasting the wrong side of a print patch. The first method given in the lesson is simpler and stronger than the second method of finishing off the wrong side, but the second method makes a flatter patch, and is better for ironing.

## CHAPTER VIII

## REPAIRING HOUSE LINEN, etc.

1. Sheets and Tablecloths.-Sheets and tablecloths generally wear out more quickly in the centre, and they are sometimes torn at the edges and corners. When they are worn out in the centre and the selvedges are good and strong, the best method is to unpick the hems at the selvedge corners, and to place the selvedges together, and seam them on the right side, and flatten the seam, then fold the article exactly in the middle, and cut along the crease, then cut away all the worn parts in straight, even lines, and fix hems at the sides. By this method the sides become the centre, and the centre the sides. If much of the centre has been cut away, the sheet or tablecloth can be used for a smaller bed or table. If sheets are too much worn to be repaired in this way, they can be cut up and made into pillow-slips ; and tablecloths can be made into traycloths and table napkins.
2. Sheets, Pillow-slips, Tablecloths, etc., can be repaired by darning or patching, before they are cut up for other household purposes. The darns are Thin Place, Cross Cut, Twill and Wave, and Damask. The latter is made in imitation of the pattern on the tablecloth, and requires much time and patience to be done effectually and well.
3. Renewing Parts of Garments.-A good mother or nurse will examine all parts of the clothing of the children every night, and will put on new buttons when these have been pulled off (and new tape strings), and darn or patch fractures in the frocks and pinafores; and set aside worn socks and stockings to be washed preparatory to being


Fig. 77.
darned. Chemises often need new sleeres and trimming, and shirts require new wristbands, collars, and front folds (or fronts), and these can all be renewed by the thoughtful, thrifty mother or sister. Darning, and patching, and renewing are all means of saving, and when girls are trained to mend and repair their own clothing, and that of others in the household, they are made thrifty, tidy, and industrious members of a community.

## A PLAIN OUTEIT OF UNDERCLOTHING FOR A GIRL BETWEEN 15 AND 17 YEARS OF AGE.

Every girl who is obliged to earn her livelihood early in life should possess a small stock of good, strong underclothing when she enters her first situation. English school-girls are not, as a rule, so well off in this respect as

French giris, for the latter very rarely leave their dayschools without a small and suitable outfit, made by themselves. When a stock has been formed, it should be kept in constant repair, and steadily replaced. The following table gives a few necessary articles for a workinggirl's outfit, with the quantities of material required.

Number of Garments.
3 Chemises
3 Pairs of Drawers $\}$
3 Nightgowns
2 Flannel Petticoats
2 Petticoat Bodices
1 Blue or Brown Serge Petticoat
3 Pairs of Hand-knitted Stockings

Quantities of Material.
$\left\{\begin{array}{l}2 \text { dozen yards of calico. } \\ \text { There will be sufficient over }\end{array}\right.$ for petticoat bands.
. 3 yards of flannel in each.
. 2 yards of gray twill calico.
. 3 yards of serge.
. about 1 lb . of wool.

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THE END


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[^0]:    N.B.-This darn is used for stockings, socks, and other knitted garments, and for table linen.

